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NIVERSITY RESEARCH MONOGRAPHS
Number 8.

ART EDUCATION IN ELEMENTARY SCHOOLS

UNIVERSITY RESEARCH MONOGRAPHS

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No. 8. Art Education in Elementary Schools, by Fredrik V. Nyquist.

WARWICK AND YORK, Inc.,
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Art Education
in
Elementary Schools

BY

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Institute of Technology

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ART EDUCATION
IN
ELEMENTARY SCHOOLS

CHAPTER I

THE AIMS OF ELEMENTARY ART EDUCATION

The modern purposes of art education in elementary schools are an outgrowth of the statements of aims derived from the past and readjusted to present-day situations. Originating from a multitude of sources they present little unanimity of opinion and it is consequently necessay to organize these historical aims as well as their modern derivatives according to type and variation for purposes of evaluation.

Historically the objectives of art education may be classified under three categories: (1) cultural aims, (2) pedagogical aims, and (3) economic aims. In brief, the *cultural objectives* aim toward liberalizing the learner by broadening and deepening his interests and knowledge along art lines and by providing for heightened appreciations of nature and objects of fine and industrial arts. The *pedagogical aims* consist mainly of three divisions: (a) visually, of training the eye in spacially analytical observation and discrimination of visual magnitudes, lines, areas, forms, tones and colors according to differences, similarities, and combinations, (b) mentally, of developing memory for forms and mental ability of manipulating form reproductively and creatively, and (c) manually, of establishing certain motor coördinations and controls. The *economic* or *efficiency aims* of graphic and plastic arts education are chiefly utilitarian and industrial in character, the latter tending toward the improvement of manufactured commodities through better design.

In the progress of art education the *cultural aims* have received historic support from Hellenistic to modern times and have been variously championed through the ages by such renowned scholars as among others Aristotle, Sir Thomas Elyot, Herbert Spencer and John Ruskin. Art as a cultural value in education has been a recognized sponsor of appreciative power in enjoying the beauty of art and nature; of developing judgment in the discrimination of ugliness from beauty and degrees of art quality in objects of the fine, industrial and allied arts; through art information and contacts of promoting understanding of the artist's ideals, problems and the significance of his work; of producing permanent interests in the arts serving as an ennobling influence and a worthy use of leisure time; and in general of constituting a regulative factor in human behavior.

Although early recognized as a cultural and educative medium by the Greeks, art education did not receive special *pedagogical emphasis* until the advent of the natural educationists and their forerunners in the seventeenth and eighteenth centuries. Comenius, Locke, Rousseau, Pestalozzi, Herbart and Froebel, as well as their followers, discerned the extensive possibilities of art in learning and upheld it, not only as a cultural factor in education, but also as an important means of perceptual learning in realistic and developmental education. The pedagogical purposes thus substantiated were along the three-fold lines enumerated above. Visually, art education by means of drawing gave concrete form to hazily perceived sensations and impressions thus serving as a valuable factor in perceptual learning, proved a powerful aid in sustaining attention and training observation, and through the medium of pictures art formed an important part of object lessons in realistic learning as well as in esthetic education. Mentally, art instruction was found to stimulate the play of imagination, to give outlet for creativeness in graphic and plastic terms, and to provide a precise language as necessary for the expression of certain facts of form and color as the terms of arithmetic and spoken language are essential for expression of facts of number and verbal thought. Manually, art activities gave new scope for the development of the large and small muscles in certain skills which were regarded as having special relationships with writing, and, in general, art constituted a propaedeutics and tool for all learning. All these aims, then, have been advanced as the pedagogical purposes for the introduction of art instructions into elementary school curricula.

In America the *economic purpose* of proposing art in education had particular significance in relation to the development of industrialism. The necessity for competitive and distinctive production in the United States called for well trained designers and it was primarily to meet this demand that art education was proposed as a compulsary subject of instruction. Specialized art education for practical or religious purposes, however, had hitherto been encouraged during many eras in Europe, but the stimulus given professional art training during the nineteenth century was the first of its kind in the new world. These economic aims, however, were largely recognized as purposes pertaining to technical education, except at first in the United States where the insistent need for designers encouraged a specialized emphasis even in general art education, and which tradition maintains to some extent today.

The shift in emphasis between these divergent types of aims has been continuous. The placement in emphasis has been due in part to national traditions, exigencies of the times, religious dogmatism, and like causes. Thus in America the pendulum has swung between the cultural and the economic aims, the stress on the cultural aims of art education having fallen at some times due to the influence of European tradition and at other times sharply reacting in the economic direction because of the needs of our industrial development.[1] It will be seen, then, that these aims of art instruction which were reflections of European conditions upon American education have influenced the trend of art education for some periods and have correspondingly been changed as our national culture demanded educational readjustment.

Together with the changes in national life certain changing conceptions have occurred in educational theory which also affect present-day aims and methods in art instruction. The application of the scientific attitude and the method of experimental research toward education and the principles derived therefrom have demanded certain concessions from traditional aims. For instance, the claims for a general transfer of training so widely held at one time are today suspect. Thus the capacities developed through training in drawing at one time associated with abilities for handwriting, mathematics, language and appreciation of art have little positive current status. The assertion of a correlation between drawing and handwriting which has been made by many, e.g., Pestalozzi, "without drawing, there can be no writing,"[2] is refuted by an extensive study conducted through the General Education Board by H. T. Manuel, in which he arrives at the conclusion that "Achievement in handwriting and ability in drawing are relatively independent of each other."[3] Hence, although the statement of Pestalozzi's, if regarded from an evolutionary viewpoint, is true—writing being historically first drawn pictographs, evolving into ideograms, phonograms, and finally into cursive writing—a present-day objective for drawing as a propaedeutic for handwriting is not considered sound.

---

[1] Vide: William G. Whitford, "Brief History of Art Education in the United States," *The Elementary School Journal*, XXIV (October, 1923) 109–115. Also: (6).

Similarly, drawing has been regarded as having special bearing on mathematics—e.g., Immanuel Kant, "for drawing and modeling . . . a knowledge of mathematics is necessary."[4] At the time when drawing was approached logically from rectilinear to curvilinear geometric figures the relating of drawing to geometry may have been valid, but this approach, and hence the transfer of training implied, is now invalidated. It has been proven by the above mentioned study furthermore that little correlation appears between drawing ability and mathematical reasoning.

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[2] Horace Mann, *Life and Works*, Vol. III, p. 328. Boston: Lothrop, Lee & Shepard, 1891.

[3] H. T. Manuel, *Talent in Drawing*, pp. 120–122. Bloomington, Ill.: Public School Publishing Co., 1919.

[4] E. F. Buchner, *The Educational Theory of Immanuel Kant*, p. 175. Philadelphia: J. B. Lippincott Co., 1904.

Again the contention that verbal language and drawing as a graphic language are related, being both means of expression, is negated by the conclusion that "linguistic ability and talent in drawing are related only from the point of view that general intelligence and talent in drawing are related,"[5] that is, general intelligence conditions both creative ingenuity and expression. On the other hand, F. C. Ayer (**1**: 162 ff.) found a positive correlation between analytical drawing and scientific written description.

Finally, it is believed that there is a transfer of training from technical activity in drawing and design to art appreciation. Though there may be certain so-called "appreciations" of technical accomplishments or possibilities and certain intellectual understandings of artistic synthesis developed as by-products through training in performance abilities, it does not follow that response by feeling (esthesis) in appreciative situations is always achieved or, at least, can not be attained by more direct means. This, however, is not to be interpreted as a fallacy in art objectives but as a misapplication of method, based upon the notion of a general transfer of training. In art as in other school subjects, then, the doctrine of general discipline is not regarded as entirely tenable, particularly in view of the scientific evidence induced through experimentation and present data on transfer of training.

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[5] Manuel, *loc. cit.*

While a general transfer of training from art to other school subjects in the elementary curriculum is justly not conceded, quite sufficient values for art education in its own right remain to make unnecessary any special pleas for general relationships or hypothetical correlations. The modern elementary curriculum, the writer believes, will recognize in current objectives, however stated, these five-fold functions of art instruction: (1) *communication*—the usage of pictorial and plastic art as means of informational record and imaginative expression; (2) *observation*—perceptual learning through directed attention to forms, lines, areas, tones, colors, and their combinations and associations; (3) *construction*—development of the capacity for visualization, planning and objectification of two and three dimensional art problems; (4) *selection*—specific recognitions, comparisons and judgments of art qualities in commodities; and (5) "*appreciation*"—currently so-called; that is, esthetic contemplation through guided attention to nature and graphic and plastic art for purposes of enjoyment.

As recognized in these aims art functions along the two distinct lines of art as language and art as beauty. In the case of the communication and observation aims art is regarded as language, while in the instance of the construction, selection and appreciation aims art is considered as beauty. This dual function of art instruction may well be kept separate in mind, and in this respect art education bears a striking resemblance to the study of English in the schools. Like English composition, drawing is read and written as a language, and akin to English literature art is enjoyed and appreciated for its beauty. Further it is patent that these are both production and utilization aims, the objective of communication and construction being partly or wholly productive in character, whereas the purpose of observation, selection and appreciation is largely consumption.

Considering the linguistic purposes of art, then, apart from the beauty objectives, the *communication* aim, regarding graphic and plastic art as language, is seen to furnish a new medium for the expression and reception of thought and experience. As such it is primarily a language to be read and understood in most cases and secondarily to be acquired and written. Thus in the case of informational drawings such as descriptive, diagrammatic and instrumental drawing, and in the case of esthetic drawings in various modes and mediums, it is a language requiring a reading knowledge and understanding and, except for professional or amateur interests, a form of language less necessary for acquisition in written form. These objectives of communication through "reading" of drawings have been suggested by Franklin Bobbitt:

17. Ability to read drawings . . .
804. (2) Reading architectural plans.
814. (19) Reading a picture in a fashion book.
14. Ability to read and interpret facts expressed by commonly used types of graphs, diagrams . . .
16. Ability to use maps with ease and understanding.[6]
(2: 12, 187, 194)

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[6] F. Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

These specific aims might be elaborated to include all forms of descriptive, diagrammatic and instrumental drawings.

For certain subjects of instruction and many instances in adult life, however, drawing is considered an invaluable language of "written" expression. Of the former the teaching of the natural sciences affords a case in point. And in instances throughout the elementary curriculum where concrete record of visual facts are desirable for clarifying or intensifying impressions, it holds a legitimate place in the training of all pupils. "When, in explaining the form or construction of an object, drawing is used as an aid, the purpose of the drawing is to make ideas clear, not to express feelings of beauty. Drawing and coloring, both free-hand and mechanical, are therefore to be regarded as tools, as the technique of a language for expressing ideas more effectively than the same ideas can be expressed in words. A need for drawing is felt by all persons for this purpose of more clearly expressing ideas"[7] (**3**: 338–339). Recognizing this end Bobbitt has proposed as specific objectives:

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[7] From F. G. Bonser, *The Elementary School Curriculum.* By permission of The Macmillan Company, publishers.

15. Ability to express facts by means of graphs, diagrams . . .
814. (18) Sketching garments seen in order to reproduce them.
17. Ability . . . to prepare simple drawings or designs.[8] (2: 12, 194)

Again there are certain recognized values for imaginative drawing as embodied in compositions, illustrations, and designs. It is unnecessary at this point to recall the importance of imagination in the development of man's estate, suffice it to say that the reshaping of existing materials into newly organized forms upon which progress itself depends is in turn necessarily dependent upon creative imagination. If imaginative drawing can be made to stimulate visual imagination and show definite outcomes through inventiveness in graphic, plastic, architectural—and in some cases mechanical or industrial—directions its importance is immeasurably established. As such, art education furnishes one of the few, if not the only, means of developing visual imagination in the elementary school curriculum.

Turning now to the second of the language aims, *observation*, as an objective of art education, pertains to realistic notation, esthetic observation being included under the aim of appreciation. Realistic observation in art deals with those types of attentiveness trained during the act of graphic or plastic recording making for acuity of vision even in cases where record does not follow. Here the contribution of art education to realistic observation is distinctive and may be regarded as both supplementary and complementary to general and scientific observation. It is supplementary in so far as drawing as a language, differing from the verbal idiom, shapes and expresses thoughts in ways correspondingly different, and it is complementary in that art training bearing upon optical mensuration of proportions, observation of surface dispositions, color notation, etc., provides a new method of analysis and of organizing impressions in spacial and chromatic situations.

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[8] Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

"The skill that is represented by the ability to draw is more important from the preparatory than from the utilitarian point of view," writes William Chandler Bagley in "Educational Values." "One may well believe that there should be, in the teaching of drawing in the lower schools, a more explicit recognition of this preparatory value."[9]

[9] From William Chandler Bagley, *Educational Values*, pp. 133–134. By permission of The Macmillan Company, publishers.

Bobbitt supports this assertion by contributing the following:

> Objectives of Visual Art
>
> A. In the basic training:
>
> 401. Ability, disposition, and habit of diversified *observation* of men, things, and affairs as an enjoyable and fruitful leisure occupation.
>
> 403. Ability profitably to utilize pictures, and other visual modes of representation, as means of *indirect observation* of men, things, and affairs.
>
> 501. A proportioned and emotionalized intellectual apprehension, such as one's natural capacities will permit, of the realities which make up the world of man's life:
>
>   (q) The world of form, color, visual art.
>
>   (r) Man's inventions and creations. In each field: awakened interests; tendencies to attention; appreciations; normal emotional reactions.[10]
>
> (**2**: 225, 20–21)

In the linguistic phase of art education, then, "the study of drawing and design is for the serious purpose of giving to pupils a language and form of thought of the greatest practical significance in our present age."[11]

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[10] Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

[11] Franklin Bobbitt, *What the Schools Teach and Might Teach,* p. 70. Cleveland: The Survey Committee of the Cleveland Foundation, 1915.

Of the aims of art as beauty, the term *construction* is here used in its widest sense to signify the training for those constructive activities in everyday life engaged in by all to make the personal, domestic and social environment more attractive. The care for personal appearances and the disposition of the home are two chief items in the constructive esthetic activities performed by all, and correspondingly receive particular stress in art education. Some objectives of this nature are cited by Bobbitt:

310. Ability in dress and otherwise to maintain a proper personal appearance.
814. Ability to design (and) select the materials (for) . . . clothing.

For art in the home:

311. Ability to create and maintain a homelike and hospitable atmosphere about the place in which one lives.
804. Ability to participate intelligently in the original planning of one's home.
    (3) Planning a house in its general arrangements.
    (6) Planning the equipment of a home from the standpoint of beauty . . .
    (7) Selecting and hanging pictures so that they contribute the maximum of aesthetic effect in the furnishing of the home.

(8) Arranging furniture so as to have the maximum comfort and convenience and the most pleasing effect.[12] (**2**: 18, 193, 187)

A preparation for numerous other unspecialized activities of esthetic nature is made in art study in fulfillment of the aim of construction in such activities as:

817. (7) Making the table and food attractive.
803. (6) Framing pictures.
810. Ability to perform the operations involved in the care of the premises and garden.
    (4) Arranging ornamental plants in accordance with the principles of decorative design.
    (14) Cutting flowers, and arranging for decorative purposes.
    (25) Keeping that portion of landscape for which one is responsible attractive to the eye.[13]

(**2**: 196, 187, 190–191)

Under the head of construction may also be classed those amateur and semi-specialized performance abilities trained in pupils having special interests in the fine arts, some of whom will become producers of art and receive vocational training at later stages of the educational program. As stated by David Snedden in "Educational Sociology:"

[12, 13] Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

3. A small proportion of our youths, selected because of evident promise as producers of art qualities in some of their numerous forms, will be encouraged and assisted. They will be given high-grade specialist service, in the hope that productive proficiency in the art-using vocations will result.
4. Another small proportion of talented persons will, if they desire it, be given special facilities for becoming producers of art qualities as avocations or on the basis of amateur performance.[14] (5: 570)

These general aims may be supplemented by certain specific objectives as suggested by Bobbitt:

415. Amateur ability in fields of the fine arts.
503. Ability and disposition throughout life, according to one's native capacity, to engage with pleasure and profit in a varied repertory of . . . aesthetic activities of play type for the sake of maintenance of one's mental integrity and virility.
819. An amateur ability to do productive, creative, or interpretative work in the field of the fine arts.
    (5) Drawing or painting.
    (6) Designing, shaping, decorating, and otherwise finishing pottery or other works of ceramic art.
    (7) Designing: dress design, house design, landscape design, advertising design, etc.[15] (2: 20, 25, 197)

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[14] D. Snedden, *Educational Sociology.* New York: The Century Company.

[15] Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

The last named objective may be augmented to include design and execution in the various fields of the allied, commercial, and industrial arts.

Construction, then, aims to bring beauty into the environment and "the purpose served by beauty in our surroundings is to give satisfaction and enjoyment, a reason sufficient of itself; but beauty contributes also an influence in producing a tone or attitude that is wholesome and ennobling."[16] (**3**: 344)

Another mode of bringing beauty into the environment is through the choosing of esthetic commodities, which may be subsumed under the study of *appreciation*. The department of study currently called "appreciation" deals with two separate types of activities, namely (1) esthetic contemplation, (2) the evaluation and selection of esthetic objects. Appreciation in its strictest sense means evaluation and denotes a state of mind entirely unlike esthetic contemplation which the common usage of the word "appreciation" implies. To maintain a clear distinction between these two meanings we may speak of selection or selective judgment as apart from esthetic contemplation. Selection, the so-called consumer objective in art education, has as its motive the raising of standards of living for all people through the selecting of more esthetic commodities in the environment. This implies the development of artistic "taste" through the building of esthetic standards of judgment by acquaintance with fine examples of the arts, the recognition of art quality in objects through conscious comparisons with the preconceived standards, the judging and selecting of these in intelligent consumership.

---

[16] From Bonser, *The Elementary School Curriculum.* By permission of The Macmillan Company, publishers.

"The fine art problem largest in everyday life is that of so selecting the material supplies and conditions of our surroundings that they may be a constant source of enjoyment and delight to us"[17] (**3**: 343). To provide this optimum condition the value of training for selective art consumership has been confirmed as, for example, by Snedden in "Educational Sociology:" "1. Systematic effort will be made to elevate within moderate limits the utilizing tastes or appreciations of all, as a part of general education."[18] (**5**: 569)

---

[17] From Bonser, *The Elementary School Curriculum.* By permission of The Macmillan Company, publishers.

[18] Snedden, *op. cit.*

Some specific objectives under this head furnished by Bobbitt, are:

813–814. Ability wisely to select garments.
3. Choosing clothing suitable to occasion . . .
4. Selecting clothing that is becoming in line, construction, color, and texture . . .
5. Selecting appropriate clothing accessories.
6. Selecting shoes that are satisfactory from the standpoints of . . . appearance, and appropriateness to use.
9. Judging textile materials as to . . . attractiveness . . .
12. Judging of appropriateness of fashion design to material.
804. Ability to participate intelligently in the original planning of one's home.
5. Selecting household linens.
7. Selecting . . . pictures . . .
9. Selecting furniture, draperies, floor-coverings, decorations, etc., from the point of view of economy, durability, and serviceability.
10. Choosing the decorations of rooms, wall paper, draperies, pictures, rugs, furniture, etc., so that the whole will comply with the principles of household design.[19] (**2**: 193–194, 187–188)

Beside these selections of personal or domestic property in the field of clothing and household furnishings, innumerable articles in the class of textiles, ceramics, metal wear, leather products and mercantile goods are objects of esthetic choices, and esthetic selections enter not only in domestic life but also into industrial, commercial and social situations.

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[19] Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

Vocational selection in art may also be classified under this aim, demanding of the talented pupil an intelligent selection of that field of art endeavor best suited to the individual's native capacity and inclinations, or in the words of Bobbitt:

> 215. Ability wisely to choose a specialized occupation in which one can give good service to one's self, to one's family, and to society.[20] (2: 17)

In the sense of *esthetic contemplation,* "appreciation" aims to stimulate, encourage, and direct wherever possible, esthetic responses to beauty in graphic and plastic art. However important the contributions of art education to realistic observation and record, in the field of esthetic observation graphic and plastic art instruction makes its unique contribution. Art education is the only subject in the curriculum which deals with visual experiences from the esthetic point of view. All other school subjects treating substances do so from the angle of defining their composition and function or evaluating their worth. In the esthetic observational phase of art education objects are regarded from the point of view of their esthetic effect—pure form—as distinct from composition, meaning or use, and the attitude of contemplation is exercised rather than of description, explanation or speculation. It is in this field of esthetic contemplation that the highest value of art to society resides, serving as it does to raise individual experience above the commonplace to the spiritual and ministering on the same plane to beauty as the religious experience does to the good.

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[20] Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

"The purpose of studies in the enjoyment of paintings and sculpture is to cultivate appreciation of the beauty of design as it enriches and deepens the meaning and appeal of a situation, occasion, event, or conception. Such artistic presentations both satisfy by their beauty, and influence character and conduct by their stimulations"[21] (**3**: 344–345). Some statements of objectives for esthetic contemplation in education are:

---

[21] From Bonser, *The Elementary School Curriculum.* By permission of The Macmillan Company, publishers.

414. Ability to utilize the products of the visual arts as sources of enjoyable and profitable aesthetic experiences.
502. Ability effectively to perform the mental activities involved in the proper exercise of the many specific functions which one should perform . . . right . . . *attitudes*, and *appreciations* of things involved.[22]

(2: 20–22)

The value of esthetic contemplation to individuals in the words of Huxley is that they shall "have learned to take refuge in the great source of pleasure without alloy, the serene resting-place for worn human nature—the world of art."[23]

These five functions of art instruction, then, relate themselves definitely to the three types of historical aims enumerated above. Communication (1) on the amateur level is distinctly a cultural aim; on the professional level (e.g., painters) an economic aim. Observation (2) may be thought of as a pedagogical aim. Construction (3) may be classified as pedagogical or cultural in the amateur stage; economic in the productive stage (e.g., architects). Selection (4) is again cultural for the amateur; economic for the professional (e.g., art dealers). Lastly, "appreciation," is essentially cultural.

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[22] Bobbitt, *How to Make a Curriculum.* Boston: Houghton Mifflin Company.

[23] Thomas Huxley, "A Liberal Education," in *Science and Education*, p. 89. New York: P. F. Collier & Son, 1902.

These aims expressing the values of art in education, aid in the liberalization of the individual beyond a narrow rationalism and factual acquisition by raising and widening not only his intellectual horizon but primarily by developing the esthetic phase of his character. The range of possibilities of art education have been well stated by Francis Parker in his "Talks on Pedagogics:"

> The theory of concentration brings art home to every child; makes it an incomparable means of personal education; discloses hidden springs of beauty; turns its vast influence upon intellectual power; cultivates the most exalted emotions and the noblest motives; leads to an absorbing love of the beautiful in nature and art; unites it with all other conditions of educative work; but best of all, it takes art from its isolation and renders it a common good.
>
> I have not the slightest doubt concerning the direction of art in education: it is to be made the strongest aid to attention, the mightiest help to observation, and the most powerful stimulus to the imagination; it is to become an indispensable auxiliary to all study.[24]

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[24] From Francis W. Parker's *Talks on Pedagogics*, pp. 305–306. Used by permission of Laidlaw Brothers, Inc., owners of the copyright.

To this statement may be added John Dewey's view on the place of art in present-day American education:

> There has been great loss in relegating the arts to the relatively trivial rôle which they finally assumed in schooling, and there is corresponding promise of gain in the efforts making in the last generation to restore these to a more important position. Viewed both psychologically and socially, the arts represent no luxuries and superfluities, but fundamental forces of development . . . Art—in the aesthetic as distinct from the technical and industrial sense—is to be regarded as a perfected expression of any crude or primitive mode of activity which has gained a recognized social value. It is essentially a *consummation*, a refinement and idealization of what is originally done and acquired from more direct and practical motives. It represents the end to which all other educational achievement should tend—its perfected goal.[25]

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[25] From John Dewey, "Art in Education" and "Course of Study, Theory of," in *A Cyclopedia of Education*, Vol. I, p. 224, Vol. II, p. 222. Paul Monroe, editor. By permission of The Macmillan Company, publishers.

CHAPTER II

THE SCOPE OF ELEMENTARY ART EDUCATION

The major content of art instruction developing out of the multiplicity of historical aims was drawing, and drawing to many has long been synonymous with art education. An expansion of the material of instruction soon developed, however, which compassed such features as the history of architecture, painting, and sculpture, historic ornament, design and color, applied art and art appreciation with a gradual inclusion of the elementary activities and materials of manual training and the household arts.

The content of art instruction began its evolution with the making of geometric drawings from placards and type solids, dot drawing (stygmagraphy) and quadrilled drawing, perspective drawings of wooden models, mechanical drawing plates and historical ornament. The influence of Rousseau's teachings on natural education introduced nature drawing—from plaster models—and finally freehand drawing of real objects and illustration of literary themes entered art study. The establishment of the kindergarten idea witnessed many manipulative activities, particularly modeling, carried into the primary grades and with the introduction of the manual training and household arts movements handwork and applied art occupied a large part of art instruction in grammar grades. The traditional content thus established included diverse elements and activities, a multitude of media and the subject-matter injected consisted of elements from kindergarten education, the household arts, manual training and most recently the allied content of elementary industrial arts.

The complex of materials and activities arose in part out of the numerous aims, interpretations and emphasis of art instruction and partly because of the seemingly fundamental discrepancy between art education and other subjects of instruction. This apparently essential difference between art and the common branches, however, is on inspection relatively superficial. Like the basic social arts, drawing develops a caligraphic mode of expression not unlike writing, a means of recording and receiving facts somewhat like written composition and reading, and the arts of computation and measurement are often applied in art work. Similar to the liberal studies much of geographic and historical data enter into art teaching, the natural sciences correlate with art instruction at many points, and the parallel between appreciation of literature, music and that of graphic and plastic art is very close. Finally, there is a self evident relationship between fine arts and practical arts education. If a fundamental difference must be insisted upon it lies in the fact that the primary significance of art in education is the development of esthetic attitudes towards the visual world. Only secondarily is general art instruction in elementary schools intent upon the acquisition of factual relationship or training in performance abilities. Thus the relatively intangible major outcomes of art instruction being in the nature of esthetic attitudes, developed judgments, abilities, interests and appreciations have been often regarded as negligible, while in the effort to make results concrete much material of dubious value has been inserted into art instruction.[26]

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[26] The present non-measurability of the art appreciation product should not be regarded as an impeachment of its worth but rather as a direct challenge to educationists, if measurement is deemed necessary, to devise sufficiently sensitive instruments for its adequate detection and measurement.

In consequence of this heterogeneity of instructional material the particular problem of present-day art education has been to select the subject matter and pupil activities best suited to the development of the knowledge, habits and skills, attitudes, interests and appreciations indispensable for the attainment of modern art objectives. Of this hereditary material of instruction, therefore, modern art education recognizes as valuable for the achievement of current aims four major art experiences: (1) drawing, or the graphic and pictorial experience; (2) design, or the projective and decorative experience; (3) construction, or the structural and motor experience; and (4) "appreciation," or the evaluative and esthetic experience.[27]

The *drawing experience* is a means of fulfilling primarily the requirements of the art language aims of *communication* and *observation* and deals with two distinct phases of drawing: graphic record and pictorial expression. Because of the subject matter with which they deal and the manner of treating it these two modes of representation may be profitably kept distinct. Graphic record consists in the usage of the drawing idiom employed in conveying mathematically accurate or commensurable information, whereas pictorial expression deals with the imaginative or esthetic presentation of emotionalized phases of experience. Graphic record presents facts as they are known to be, logically, while pictorial expression may content itself with representing things as they are seen, visually, or as they are felt to be imaginatively. To the sphere of graphic recording belong house plans, geological survey maps, orthographics in cabinet, isometric or oblique projections, *per contra,* to pictorial expression pertain illustrations, caricatures, historiations, compositions. Graphic record employs for its purposes descriptive drawings of the diagrammatic, analytical, and informational types, and instrumental renderings of mechanical, machine and architectural drawings as pictorial expression uses representational, memory and compositional drawing in artistic renditions through various mediums. Both of these drawing idioms, then, have been found valuable in developing a reading and writing knowledge of drawing.

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[27] First stated by W. G. Whitford as: "drawing, the graphic experience; design, the ornamental experience; construction, the motor experience; and appreciation, the mental experience," in "The Problem of Differentiation and Standardization of Art Work in Modern High Schools," *The School Review*, XXXII, (May, 1924) 341. Also: (6).

Besides the value of this linguistic knowledge, drawing presents claims as a valuable means of perceptual learning, as developing not a general observational power, but specific observation in visual situations. The burden of the proof has been shouldered by F. N. Freeman and F. C. Ayer, the former of whom states the case for drawing as a mode of perceptual learning:

> Drawing (like writing) also includes both the recognition of form and its representation, but in this case the element of recognition is more prominent, and therefore drawing is taken as an illustration of perceptual learning. Drawing is commonly regarded as an illustration of the development of motor habits. The production of the form upon the paper is thought of as the chief element in the process. This, however, is a secondary part of the whole process . . .
>
> The recognition of . . . an object is not chiefly a matter of gaining impressions, but rather a matter of actively analyzing the characteristics of the object. Put in another way, this principle means that the development of the ability to recognize such an object is not primarily the development of keenness of the senses, but rather the development of a mode of arranging or organizing the sensations which we receive from the object and giving to them a meaning.

> . . . As the recognition of form is made accurate and complete by the active response of drawing, so also do the active responses which we make influence very greatly all our preceptions.[28] (4: 34, 38, 45)

That observation is developed through analytical drawing has been established through the study of the value of "drawing as a device in laboratory teaching of science" by F. C. Ayer where the conclusion is reached that:

> The preconceived purpose of analytical drawing supplies the direction of attention which is lacking in spontaneous description. The attention is directed to the particular characteristics of the object which are of immediate scientific concern. The successful type, schematic, or diagrammatic drawing cannot be made without analytical study. (1: 164–5)

As the particular purpose of art education is to teach these types of drawing in the study of graphic record and pictorial expression, the function of the drawing experience is seen to satisfy the aims of communication and observation with the emphasis so placed as to regard art as language.

Design, or the projective and decorative experience, may also contribute materially to the linguistic phase of art education, especially through the factor of color, but is generally regarded as pertaining to those aims dedicated to art as beauty. The projective phase of this experience deals with structural designing, whereas the decorative part of the experience is concerned with the making and application of ornament. The designing of an article to be constructed in wood is an example of the initial part of the experience, whereas the designing of the ornament for the decoration includes the termination of the experience. Structural design usually takes the form of working drawings, plans or sketches in tri-dimensional constructive terms. The pencil is here used merely as a tentative means of experimenting without recourse to actual working materials. Though the product of structural designing is, therefore, in terms of graphic record, and hence may be virtually regarded as part of the graphic experience, its educational value is actually of a quite different nature. The real contribution involved in designing structurally lies in projecting the intention mentally from beginning to completion, while foreseeing all the implications and difficulties of execution. The solution of such a design problem is then usually carried to completion in applied art as part of construction or the structural and motor experience.

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[28] F. N. Freeman, *The Psychology of the Common Branches.* Boston: Houghton Mifflin Company.

In considering decoration as part of the design experience, we pass over the border from art as language to art as beauty. Design in its narrower significance of decoration provides experiences with ornament and color through pure and applied design. The universal tendency among mankind to add the pleasing after the conditions of utility have been satisfied, is reenforced in this phase of art education by the study of decoration together with structural design. Pure design, which considers solely the ornament apart from its use, is studied in order to isolate the principles of design for understanding and to employ these principles in practice. Applied design stresses the adaptation and fitness of the design to its purpose and the processes by which useful articles are embellished.

Throughout all the art experiences color plays an important part, but it is most frequently considered together with design because the principles governing color harmony are definitely related to the principles of design itself. Similar to pure design, color is considered both apart from and in conjunction with use. Thus the properties of color are considered divorced from application to discover their unique qualities and the possibilities of combination and harmonizing. In applied form color is used in many modes and mediums for expressive and decorative purposes.

Construction, or the structural and motor experience, the third of the experiences recognized as valuable for achieving current art aims, carries design forward to its completion. This requires at times the fashioning of an article with tools and materials, and in other cases merely rearranging existing objects or materials. The making of a flower bed is such an activity as first mentioned; whereas, the rearranging of furniture in an interior is a constructive effort of the second kind. Construction in the terminology of art education, however, has come to hold a very meagre connotation related solely to those activities of the primary grades dealing with elementary activities in cardboard construction, sand-table work and industrial arts projects. In the wide sense in which it is here used, construction implies a broader interpretation of art as applied to daily life.

Applied art in this comprehensive sense includes all the phases of those activities which attempt to reshape and readjust forms in the environment for the purpose of satisfying our esthetic needs. This art application, then, far from dealing merely with primary grade construction work, pertains not only to art as employed in industry and commerce, but also to art as applied to the home and community and to social and religious institutions. Applied art must be adapted especially to the home and community, and it is particularly pressing upon art education in the schools to present for this purpose costume design, interior and exterior home decoration and civic art. The present tendency of regarding applied art as synonymous with applied design—that is, the experience merely of adapting decoration to objects—must be redirected to embrace the wider conception of applied art as that form of activity engaged in and that training needed by all people to make the personal, domestic and social environment more esthetically satisfying.

With these activities may be included modeling which is *per se* a constructive experience. Modeling, like drawing, contains the possibilities both for record of facts and as a vehicle of imaginative expression. Modeling furnishes furthermore the opportunity of studying the allied art of ceramics in an elementary way and largely from the point of view of understanding process and appreciating fine porcelain, china, tiles, and the other forms of ceramic works.

The final art experience, recognized by modern art education as a valuable means for attaining present-day aims, is *appreciation, or the evaluative and esthetic experience.* A double connotation is assigned to the word appreciation in its present-day usage which makes it necessary to include two quite unrelated forms of activity under one head. The evaluative experience, or appreciation in the stricter sense of the word, consists in educating for esthetic selection. This is an increasingly important department of art study which is receiving more and more merited attention on the part of educators. The wide field of material for selection may be narrowed down inclusively to the products of modern machine industry and the objects made by handicraft methods. These two fields of production, the industrial arts and the allied arts, contribute the bulk of commodities from which the consumer must select those of greatest utilitarian and esthetic value. It is the function of art education to inform these esthetic selections.

The experience of esthetic enjoyment, the commonly accepted sense of the word "appreciation," finds its greatest heights in the fine arts, allied arts, and in nature. The beauty of the visual fine arts are more than ever available for the pupils' contemplation due to greater museum facilities, traveling exhibitions, and better printed and less costly commercial reproductions. Appreciation in the sense of the esthetic experience presents examples of the fine arts of architecture, painting and sculpture on increasingly higher levels of artistry together with such correlations with history as may be profitable. Beside these monuments of the fine arts, esthetic appreciation offers contact with the beauty of the related arts, that is the allied arts of the past and the industrial arts of the present. The beauty of objects restrained by the demands of utility is found both in articles made through the handicrafts and by the machine. Finally, the beauty of nature as discovered in animate and inanimate forms constitutes the completing phase of the esthetic experience.

Though natural beauty as found in landscape and marine, in flora and fauna, and throughout the infinite manifestations of natural phenomena, is not art in the limited sense of being products of man's hand, yet it may properly belong in the province of art appreciation since art and nature are so closely related in beauty. Moreover, art in the widest sense is not restricted to man-made articles but comprises all objects giving rise to the esthetic experience.

These art experiences, then, contain the major elements of subject matter and pupil activities comprising the scope of elementary art education. Drawing, with its graphic and pictorial phases, is the chief component of the linguistic side of art instruction and is largely directed towards realizing the communication and observation aims of elementary school art objectives. Design, embodying the experience of projective and decorative intention, is completed by the construction experience, consisting of structural planning and motor manipulation, all of which are instrumental in consummating the aim of constructing for esthetic purposes. Lastly, appreciation in both its evaluative and esthetic stages endeavors to attain the highest aim of art as beauty through educating selective judgment and sensitizing esthetic responses.

Arranged in tabular form, then, the aims and experiences of modern art education, constituting its scope, may be organized as follows:

TABLE I

THE MAJOR AIMS OF ELEMENTARY ART EDUCATION

Graphic and Plastic Art as Language

Generalized Production		Generalized Consumption	
1. *Communication* "writing" knowledge of	*Drawings* diagrams, analytical drawings, informational drawings, instrumental drawings, etc. *Designs* costume designs, interior designs, exterior designs, etc. *Color* *Plastic Forms*	2. *Observation* "reading" knowledge of	*Visual Facts* expressed graphically pictorially chromatically plastically etc. *Natural Phenomena* expressed chromatically spacially etc.

Graphic and Plastic Art as Beauty

Generalized Production		Generalized Consumption	
3. *Construction* of Beauty	Personal *Environment* Domestic *Environment* Social *Environment* Vocational *Environment* Religious *Environment*	4. *Selection* of Beauty	Personal *Commodities* Domestic *Commodities* Vocational *Commodities* Social *Commodities*
		5. *Appreciation* of Beauty	*Fine Art* architecture painting sculpture *Related Art* allied arts industrial arts *Nature* landscape, marine, flora, fauna, etc.

Secondary and Tertiary Art Education

Specialized Production	Continued generalized production and consumption	Specialized Consumption

TABLE II

THE EXPERIENCES AND CONTENT OF ELEMENTARY ART EDUCATION

I. *Drawing, or the Graphic and Pictorial Experiences*
  A. Graphic Record
    1. Informational Drawing
      a. diagrammatic drawing
      b. analytical drawing
      c. descriptive drawing
    2. Instrumental Drawing
      a. mechanical drawing
      b. machine drawing
      c. architectural drawing
  B. Pictorial Expression
    1. Freehand Drawing
      a. representational drawing
      b. memory drawing
    2. Pictorial Composition
      a. illustrative drawing
      b. free-expression drawing

II. *Design, or the Projective and Decorative Experiences*
  A. Structural Design
  B. Decoration
    1. Pure Design
    2. Ornamentation
    3. Color Study

III. *Construction, or the Structural and Motor Experiences*
  A. Applied Art
    1. Costume Art
    2. Interior Art
    3. Exterior Art
    4. Civic Art

TABLE II.—(*Continued*)

- B. Plastic Art
  - 1. Modeling
  - 2. Elementary Ceramics

IV. Appreciation, or the Evaluative and Esthetic Experiences

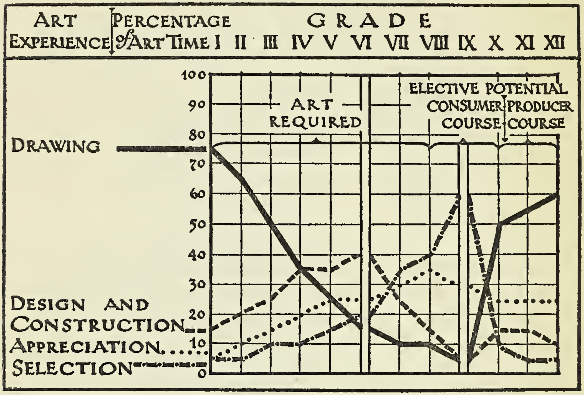
- A. Selection
  - 1. Industrial Arts
  - 2. Allied Arts
- B. Esthetic Contemplation
  - 1. Fine Arts
  - 2. Related Arts
  - 3. Nature

Numerous constructive activities that are usually considered part of the content and experiences of elementary art education are not to be found listed in section three of the foregoing outline. No mention is made of such items of study as elementary industrial arts, large scale building projects, "construction" in cardboard or "making," and sand-table work. A detailed discussion of such "construction" work has been reserved for the chapter on design and construction, in particular pages 106 to 109.

The relative importance of these art activities in elementary schools as indicated by their time allotment in current practice is given in Table III.

TABLE III

TIME ALLOTMENT OF ART EXPERIENCES IN THE PUBLIC SCHOOLS OF PITTSBURGH, PENNSYLVANIA[29]



NOTE.—In the graph, drawing, as "written" language, commands three-fourths of the first grade time and gradually decreases in allotment as a "reading" language through the grammar grades and the junior high school. The pre-vocational courses in the senior high school then elevate drawing to practically a two-thirds emphasis as a specialization. Design and construction consume a small portion of time in the primary grades but rise in the grammar grades because of developing decorative and constructive powers. These activities drop sharply during the exploratory and semi-specialized period of the junior high school. In the senior high school these activities might rise very markedly for potential producers but the average group shows slight increase. Appreciation and selection gain gradual attention throughout the grammar grades. Selection rises to its peak in the general arts course of the junior high school, whereas appreciation reaches its highest points during the age-grade levels of adolescence.

[29] By permission of the former Director of Art, J. C. Boudreau, and the present Director of Art, E. A. Stephan.

This shows a progressive effort to decrease the excessive emphasis formerly placed upon drawing and to curtail the superabundance of manipulative activities heretofore included in art instruction.

The comparative portion of time given to art in the elementary school program contrasted with other special subjects of instruction shows art education to hold a position second only to physical training. (Table IV.)

TABLE IV

TIME ALLOTMENT OF SPECIAL SUBJECTS IN ELEMENTARY SCHOOLS[30]

Minutes per week devoted to	Grade								Average time in minutes
	I	II	III	IV	V	VI	VII	VIII	
Drawing	151	84	87	82	77	77	77	76	88.8
	91	92	91	88	83	77	79	81	85.2
Music	70	130	73	74	70	70	70	76	79.1
	71	74	74	77	76	80	70	76	74.7
Physical Training	71	63	62	62	59	62	59	60	63.0
	102	99	99	100	100	101	98	104	100.3
Manual Training	65	73	62	70	77	88	112	115	82.7
Industrial Arts	60	60	60	67	70	81	103	109	76.2

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[30] The upper row of figures arranged from the original compilation by H. W. Holmes, the *Fourteenth Yearbook of the National Society for the Study of Education.* The lower row of figures from data furnished by Fred C. Ayer, *Studies in Administrative Research,* Bull. I, p. 15, Table 4, Department of Research, Seattle Public Schools, June 1, 1924.

The share of time commanded by art in the total program of all elementary subjects of instruction is given in Table V.

TABLE V

PER CENT OF TIME ALLOTTED TO EACH SCHOOL SUBJECT IN GRADES 1–8[31]

Reading	16.8
Arithmetic	12.2
Language	11.9
Physical Training	7.3
Geography	6.4
Recess	6.3
History-Civics	6.2
DRAWING	5.5
Spelling	5.0
Music	5.0
Penmanship	4.8
Industrial Arts	3.4
Miscellaneous	3.2
Opening Exercise	3.1
Science	2.9

The chapters which follow will be devoted to the treatment of the four major art experiences, comprising the scope of art education, from the viewpoint of evaluating their educational content and methodology of instruction.

[31] *Keeping Pace With the Advancing Curriculum,* Research Bulletin of the National Education Association, III, (September and November, 1925) 126. Based on data in Table 49, p. 132, Fred C. Ayer, *Studies in Administrative Research,* Vol. II, Department of Research, Seattle Public Schools.

CHAPTER III

DRAWING

The language phase of art education presents many problems to the educator, chiefly in the fields of curricular content and methodology of instruction. Just as the question of what shall be taught is the all important one for the curriculum constructor in art, so for the *méthodiste* is the question of how to be taught. An examination of both the content and methods of drawing, or the graphic and pictorial experience, will be the purpose of the present chapter.

The subject matter of art education has been gathered from many sources, as has been noted, and the persistency of tradition is a condition with which the curriculum-maker must cope. One of the chief dictators of standards in art education has been the professional art school, and it is to this source that many regrettable practices must be traced. The tendency to convey the specialized art school content, as well as its methods of teaching, into the public school program has been continuous and unfortunate in effect. This accounts for the presence in our elementary schools of the past of such studies as charcoal drawing of antique casts and still life and also for methods such as the "type solid" mode of teaching drawing—an inductive method whereby drawing mastery over generalized forms theoretically provided a preparation for the drawing of all objects.

However tenaciously this tradition has held the drawing curriculum in the past, cast drawing and laborious drill in mechanical perspective appear infrequently in elementary schools of today; "type solids" in the classroom are encountered more rarely and the old logical curricularization which began drawing with drill in horizontal, vertical and oblique straight lines is practically extinct. The content of modern drawing instruction contains such departments of study as freehand representational and memory drawing, freehand perspective, and various kinds of compositional drawing. These drawing experiences may be classified under the head of *pictorial expression* of the freehand and compositional drawing types.

In evaluating the subject matter of the present-day drawing program in elementary schools the guiding assumption which will, perhaps, be of greatest aid is that the content introduced shall be of immediate or assured future individual or social need. Tested by this criterion, the content of drawing, or the graphic and pictorial experience, in elementary schools may now be reviewed.

To begin with pictorial expression, then, *compositional drawing* is not an activity in which many adults engage. Yet considerable importance is attached to drawing of this kind as a mode of expression in the primary grades before written English composition has been developed, and it may, therefore, be considered as an immediate pupil need and valuable for growth at this time. Compositional drawing holds the additional advantage of being an unequaled means of exploring the content of children's minds and, as drawing indicates errors in conception and thought more vividly than does speech, it is also of corresponding use in correcting and informing those minds. Beyond the primary grades compositional drawing serves further as a non-verbal and concrete idiom of expression. When one considers the preponderant use of verbal expression in schooling, the value of drawing as an alternative form of communication should not be underestimated. More than this, drawing has the unique characteristic of being less abstract than verbal language and calls upon that part of the intellect which Thorndike designates as the concrete phase of intelligence as distinct from abstract or social intelligence. In the concrete nature of drawing lies its chief value as a language for the expression of objective data, and as a means of centering attention upon visual facts and relationships while supplementing, at the same time, learning through abstract ideas. Much subject matter, which in words would remain a vague abstraction, becomes through pictorial expression comprehendable and dynamic. Yet again, compositional drawing in the upper grades serves the amateur and future professional producers of pictorial art as the foundation of the art language and as a mode of developing technical understanding through doing. The value of drawing as a written language is greatest in the primary grades; its value as a reading language reaches its height in the grammar grades of the elementary school.

Two forms of compositional drawing that are allotted considerable time during the art periods are illustrative and "free-expression" drawing. The former of these correlates closely with reading and story-telling in the lower grades and with literature in the upper grades. In the elementary schools illustrative drawing has, until recently, been confined too narrowly to merely the illustration of literary themes, whereas unprecedented opportunity for illustration abounds in the social sciences and other school subjects. Illustration is an excellent activity for the fixation of ideas and relationships not only because it clarifies general concepts, but also because it focuses attention on concrete visual data.

The "free-expression" tendency in drawing, like the "free-play" innovations in physical training, is apparently an outgrowth of the natural education ideal. In art instruction the reaction against the restrictions of formalism has given considerable impetus to the "free-expression" movement. Because of this counter-active tendency, therefore, the danger in the "free-expression" movement exists in the possibility of exaggerating its legitimate function. "Free-expression" drawing means the presentation through spontaneous drawing of things felt and experienced and, as a method of instruction through non-dictated drawing, is unquestionably sound and valuable. But the general philosophy of this movement is not above question because of its relationship to the ideas of self-expressionism. The inspection of "free-expression" as a method of teaching compositional drawing will be resumed in the section of this chapter dealing with methods. For the remainder the "free-expression" movement is deserving of the consideration and encouragement due all experimentation in education. It should, however, be frankly regarded as an experiment, not to dominate the attention or usurp the time that should be accorded the other valuable phases of art education.

Turning from compositional drawing to *freehand representational drawing* and memory drawing, the content encountered takes the form to a great extent of object drawing. Freehand drawing of organic, constructed, and geographical forms is at times concomitant to compositional drawing, but in representational drawing receives separate consideration. The drawing of such forms is of value in clarifying ideas of specific things beside developing certain powers of representation. In current practices, however, the majority of such drawing is undertaken almost solely from the artistic point of view, whereas an emphasis upon descriptive drawing of these forms would prove a great asset in the upper grades. Here the need for drawing plant, animal, and human forms is for purposes of supplementing nature study and hygiene through botanical, zoological, and physiological diagrams, with an auxiliary demand for drawing diagrams of the human figure in conjunction with costume design and dressmaking. The need for drawing constructed forms is manifest in such studies as general science, industrial arts, mathematics, and, when taught, shop work and home economics, whereas geographical forms are embodied descriptively or diagrammatically in geological maps, topographies and other map types.

Freehand perspective receives considerable attention in the upper grammar grades for the purpose of representing rectilinear and curvilinear objects of three dimensions. In the past the drill in drawing "type solids" and still life objects stultified this subject, but today a quantity of articles that appeal to interest and yet contain perspective is being used instead to provide the necessary practice in this important phase of representational drawing. The clear, realistic representation of any solid form demands the use of perspective or foreshortening, and this study serves the additional purpose of a foundation for the understanding and making of isometric drawings, orthographic projections, etc.

Memory drawing in the graphic and pictorial experience cannot be said to have a content of its own which is not to be found in representational or compositional drawing, but may be regarded as essentially an approach to the learning of drawing. Hence, memory drawing will be treated further in the section of this chapter dealing with methods of teaching drawing.

Finally, the making of both representations and compositions through paper cutting and paper tearing is allied to these drawing activities. Although manipulative activities of this kind have few counterparts in adult life, yet they, none the less, aid in developing compositional, drawing, design, and color knowledge. In the drawing experience, paper cutting and tearing focus attention on the contours of the representation, thereby serving substantially in developing the child's drawing power from the scribbling stage to linear representation. The ease with which paper cuttings and tearings can be shifted and rearranged make them a capital means of teaching design and composition, and the study of color matching, harmonizing, and arranging can be readily presented through colored paper cuttings. Lastly, colored paper is an excellent medium for making individual and community posters in elementary schools, being naturally adapted to flat simple masses and brightly colored areas required for good poster design. In the main, then, the above mentioned activities embodied in paper work have considerable educational significance as aids in developing specific kinds of primary learning and are consequently justified in sharing the time given to representational and compositional drawing.

Graphic record in the elementary grades, when encountered at all, is usually found in the upper grades in the form of mechanical drawing. Many uses may be found in daily affairs for the ability to make graphs, diagrams, charts, plans or maps of an unspecialized character. But the greatest value of the graphic idiom is undoubtedly its usage as a means of gaining information through reading of graphic records. This is a department of art study that has heretofore been given little consideration, but lesson programs for acquiring a general reading knowledge of blue prints, graphs, diagrams and other forms of graphic record would provide an added value to the teaching of drawing. With these linear modes of communication may be included also the teaching of lettering as part of graphic art education.

Having concluded summarily a review of the content of the drawing experience in elementary schools, the attention may now be directed to the consideration of how this content is taught, or the issue of methods of teaching drawing in elementary schools. One of the most important guides in evaluating method, for the present purpose is, perhaps, that the methodology of instruction must be in conformity with the psychology of the particular learning process at hand. Since learning is not a passive but an active process, and since as much depends upon what the pupil does as what the teacher does, the pupil activity involved as part of the methodology of instruction must also be taken into consideration. We may assume that the chief criterion for controlling this factor will be that the pupil activity included in the method of presentation of subject matter shall be nearest the form in which it will occur in actual life. In the light of these principles the commonly used methods of teaching drawing will be examined.

The criteria proposed will demand that the methods of teaching representational drawing must make due allowance for the processes involved in the psychology of the drawing act. This drawing psychology according to Albien[32] includes two major processes: (1) the optical-perceptual process and (2) the motor-graphic process. The first of these processes is affected throughout by the mind set of the observer or the predetermined purpose of observation. In the optical-perceptual process the eye is focused on the object, the sensations of color, "value," etc., afforded by illumination are received into the visual area of the brain, the supersensory area apparently identifies the object in consciousness, and, finally, associations of ideas are assimilated with the objective impressions tending to interpret the perceived object subjectively. In the motor-graphic process the motor impulses are directed by the visual image, the imagination, or by reflection; the hand movements are influenced by previous practice or by imitation of observed movements, and the results on paper serve as a means of comparison with the appearance of the actual object for guidance and correction. As a transition between the optical-perceptual and motor-graphic processes, however, it should be noted that some form of "translation" must take place which renders the three dimensionally perceived image expressible in two dimensional terms of lines and masses.

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[32] Gustav Albien, "Der Anteil der nachkonstruierenden Tätigkeit des Auges u. der Apperception an dem Behalten u. der Wiedergabe einfacher Formen," *Zeitschrift für experimentelle Pädagogik*, Vol. V, (1907) and Vol. VI, (1908). Also: (**1**: 87 ff.).

Since the psychology of the drawing act consists, then, of forming a clear idea of the object, of noting the chief elements of the object and fixating these in the mind in terms of lines, areas and colors that will adequately represent them on paper, of observing the subordinating detail that complete the impression of the object and of so guiding the hand as to make the marks on paper conform to the essential items selected by the mind, the method of teaching drawing must correspondingly insure a training in these several processes. In short, the best method of teaching drawing, in accordance with the psychology of the drawing act, will be one which assures a clear percept or visual image in the pupil's mind and develops the power of transcribing that percept or image in graphic terms to the two dimensional plane of the drawing surface.

Since the mastery of representational drawing is essentially dependent upon imitation—an imitation of the teacher's hand movements in drawing, or of other sketches, or of the child's own mental image—the general method of teaching drawing is the method of imitation. From the outset, however, there should be a distinction made between copying and imitation. Copying, in art, is regarded as a process of reproducing a result for the purpose merely of duplicating that result. Imitation, on the contrary, may be regarded as the repetition of an act for the purpose of learning how to perform that activity. Copying is an end in itself; imitation is a means to learning. The general method of imitation then includes three formal steps: (1) the presentation of the model, (2) imitation and drill, and (3) criticism. It is to be expected that the special methods and devices for teaching drawing will contain this general methodological procedure.

Three types of *special methods in the teaching of representational drawing* appear in current practices: (1) dictation methods, (2) tracing methods, and (3) copying methods. In *dictated drawing* the method employed is one of imitating the model presented by the teacher simultaneously with or subsequent to the demonstration. Numerous variations on this procedure have been developed in the form of devices and methods. Briefly considered, some of the dictation procedures are dot-drawing or stygmagraphy; the network, trellis or quadrilled surface devices; linear methods; schema or symbol methods; and mass or geometric basis devices.

First of these, the dot-drawing or stygmagraphic device is now relatively seldom seen. It consists of a process of drawing from dictation on a surface laid out with equally spaced rows of vertical and horizontal dots. The results secured from such a device must necessarily be mechanical and unnatural. Yet, three very similar devices—the net work, trellis and quadrilled surface devices—are still occasionally encountered in present-day practices. Each employs a ruled surface in squares, diamonds or other practicable rectilinear forms to bind the main points of the pattern to be reproduced and to transfer the original drawing, point by point or line by line, to homologous parts on the copy. These devices are literally medieval, carrying back at least to the thirteenth century to the time of Villard de Honnecourt,[33] and constitute mere schematized and artificial modes of following a model. Though these devices have some value as means of enlarging or diminishing an original drawing to be copied, their practicability is extremely limited as means of teaching freehand drawing. The quadrilled surface as an approach to teaching geometric design presents a different issue which will be dealt with subsequently.

Of the dictation methods enumerated, current best practices in the teaching of drawing are unanimous in the use of linear, schema or symbol, and mass or geometric basis devices. Linear methods such as the "leading line" and "add-a-line" devices attempt to dictate the most characteristic line of the object, then to add through dictation the next lines of importance and to continue until the drawing is thus completed. This is a rationalized approach to drawing teaching and, in so far as it neglects training the capacity to analyze out these characteristic lines of the object of study and substitutes instead the teacher's analysis and dictation, it loses sight of the most important and difficult part of the drawing act. By compelling, furthermore, drill and memorization of the chief and subordinate lines for drawing of a form, it may teach merely the memorizing of lines and forms, and does not develop clear ideas of the object and the power to transcribe the visual image or percept in the mind to the two dimensional surface of the paper.

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[33] Joseph Meder, *Die Handzeichnung; ihre Technik und Entwicklung*, p. 223. Wien: A. Schroll & Co., 1919.

The schema or symbol devices attempt to arrive at the characteristic form of the drawing object through the dictation of a generalized form as a nucleus. In this case the form is approximated by dictating first a schema or symbol, e.g., dictating the drawing of a figure 2 as a starting point for drawing a swimming swan. Similar to the schema or symbol devices, the generic shape of a form to be drawn is stressed in the mass or geometric basis devices by dictating a geometric shape or a readily grasped mass as the basis for drawing a specific form, e.g., approximating the shape of a tepee by dictating the drawing of a capital letter A or of an acute angle triangle.

The likening of the form to be drawn to a known form is usually an excellent procedure, yet the dictating of this generic form upon which to build the specific object has not proven of pedagogical value. This is true, perhaps, because the generalized forms remain uppermost in the pupils' minds and are learned as so many arbitrary schemata, whereas they should exist in the background of consciousness as an approximation which aids only to simplify and clarify the explicit thing while the pupil draws. Not only does the dictating of generalized forms develop undesirable associations of ideas and encourage the learning merely of mnemonic devices, but it leaves the pupil powerless to discover these similarities and comparisons for himself and renders him unable to translate his understanding of the object to paper.

The dictation methods of teaching drawing have been criticized in general on the grounds of producing stereotyped effects and of robbing the pupil of original expression, and have been correspondingly upheld along two chief lines of defense. First, it is held that through man's "innate tendency to fool" the schemata presented by dictation serve only as a starting point for the infinite original variations which will follow. This has unfortunately not often proven the case. But whether the contention is actually true or not the fact remains that in the dictation of a generalized form upon which to build, an approximate response only has been learned which must be unlearned or conditioned for continued learning. The opposition asserts consequently that more direct methods are available. In the second instance, dictation methods are defended by the asseveration that drill in drawing dictated forms affects originality no more than practice in playing the piano affects musical creativeness. Studies in the psychology of drawing fail to confirm this assumption. Since drawing is primarily a form of perceptual learning, and only secondarily a mode of motor learning, the analogy is not valid and hence the conclusions drawn therefrom are unsound.

A second group of drawing methods in current use has in common some form of tracing as a means of setting the model for imitation. Thus, of these *tracing methods*, the drawing around a pattern and tracing over a mimeographed model are representative devices. The use of tracing paper, hectographed copies, jointed and movable patterns, are variations of the tracing idea. But the most valuable of these devices is undoubtedly the practice of tracing in the air before recording the percept or the image graphically. Such activity forms a valuable connection between the act of visualizing and the motor activity of drawing, and thereby aids in that important step of translating the image from three dimensional into two dimensional terms.

Lastly, the *copying methods* of teaching representational drawing include principally the devices of copying from charts, copy-books, other drawings, photographs and so forth as a mode of setting the model and the method of drawing directly from actual objects. The former device has been extensively used in the past, but has lost caste due to its self-evident limitations. Drawing from another two dimensional representation does not educate the draughtsman in translating three dimensional form into terms of a two dimensional plane. Its value in transcribing or copying is still recognized, but since the objects to be drawn in actual life are almost invariably presented in solid form, the method is extremely limited in scope as a means of teaching freehand drawing.

The alternative device of drawing directly from the actual object has been found very effective with mature students, but its value as a method for younger children is less considerable. Numerous investigations of children's drawing development report that young children, when asked to draw the object before them, cast one disdainful "glance (at the actual object) and proceed to draw out of their heads."[34] Moreover, insistence upon attention to the object before them serves in most cases only to confuse the existing percept and imagery and results in loss of confidence, paralysis of drawing power, or the abandonment of desire to draw. Certainly not below the fourth grade, then, can this method be counted upon as an aid in learning to draw.

When drawing from the actual object has been introduced above the fourth grade, the devices commonly used for securing right placement, directions and proportions have been the "blocking in" device, the measurement of proportions, the negative shape and extension of line devices. The "blocking in" device, wherein straight lines are used to delimit the shapes of objects, is comparable to the mass or geometric basis devices mentioned above. This device has the undesirable effect of centering attention on generalized forms rather than on specific forms and cultivates a habit of seeing and representing which is mechanical, indirect and difficult to modify. The direct measurement by pencil and plumb-line for securing correct proportions and directions has been found less desirable than the making of mathematical estimates with the eyes. Drawing the background spaces rather than the forms themselves, which is the gist of the negative shape device, is a very good check on relative proportions, directions and placements. Extending directions of lines through the forms, to ascertain if they coincide with the object as seen, has also been found of value in proving drawings.

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[34] Walter Sargent and Elizabeth Miller, *How Children Learn to Draw*, p. 244. Boston: Ginn & Co., 1916.

The most economical method of teaching drawing from the object appears to demand: (1) the analysis of the five or six most important lines, (2) the addition of the next half dozen subordinate lines; (3) the completion of the contour, and (4) the elaboration of internal details. For bringing this two dimensional drawing into the final stage of tri-dimensional representation, practice in picking out the lighted areas with white color or crayon on black paper or "spotting in" the dark areas with black ink on white paper has proven of value. Finally, the planes of the objects may be outlined and shaded in two to five values.

Lastly, with these methods may be included the rather unusual device of describing in writing the thing to be represented and drawing from the written description. This obviously reverses the practice of supplementing verbal expression by drawing, through accompanying drawing with written description. The device is valuable at times in clarifying ideas about an object, of directing attention to essential elements and characteristic details, in short, of building the percept of a thing. But its limits as a way of teaching representational drawing are prescribed in many cases by the substitution of the vague terminology of words for the needed exactness demanded for object drawing. This very vagueness, however, makes it an extremely valuable approach to teaching imaginative composition and it is, therefore, a universal method employed in the illustration of literary themes where the written description is provided by the text. Another demerit in connection with this device for purposes of teaching representation is its lack of economy in time. Identical, if not increased, values from this descriptive device can be secured through the socialized recitation, wherein a multitude of responses will serve to give a more complete idea of the object for drawing than any one individual written description.

A summary of current best practices in the teaching of representational drawing would include all or the most essential steps in the following special method of teaching drawing:

1. Select one difficult form
2. Dictate, copy or trace model
3. Accentuate difficult parts
4. Close eyes and visualize
5. Draw in air
6. Draw correctly several times
7. Draw in composition for class criticism or to be handed in.

The weakness in the method, as has been pointed out, resides in step two of the process: First, in that dictated drawing does not give the perceptual experience which is so valuable as a preliminary to drawing; deprives the pupil of the practice in analyzing the distinctive characteristics of an object so essential for really learning freehand drawing; and supplies instead the teacher's analysis, thereby disregarding one of the most important processes in the psychology of the drawing act. Secondly, the dictation of a schema or symbol as the nucleus for drawing a form violates the psychological principle that, other things being equal the activity should be learned in the form in which it will be used (in real life the form to be drawn is not presented as a symbol or schema but as a three dimensional reality). Thirdly, in this way, it places the learning of a mnemonic device before the primary learning involved, hence, establishing undersirable bonds which must be broken down or reconditioned before further learning can take place. Lastly, dictation, copying or tracing devices, when not merely ineffective or actually uneconomical, may have the unfortunate effect of arresting drawing development at some low stage of skill, of repressing spontaneity and originality, or of discouraging expression and consummating the caesura.

It should be borne in mind, however, that certain of these devices as they exist are valuable for other types of learning than those for which they are here intended or, if modified, can be very profitably used for the present purposes. Thus, of the devices used for teaching representation which may be employed for other learning, the quadrilled surface device is excellent for enlarging or diminishing an original drawing and is very valuable for teaching geometric design. In the same way copying from another drawing may be good method in learning to copy. On the other hand, the modification of the schema, symbol, mass or geometric devices can be readily adapted to the learning of representational drawing. The comparing of the drawing object to a generic form, which is the essence of the above named devices, is an excellent way of clarifying ideas of the form to be drawn and of simplifying the recording of it. But the aim should be to keep this in the "back of the mind" and learn, not to copy the generic form, but to draw the specific form.

The tendency of drawing methods to follow along the three methodological lines suggested above is largely due to the prevailing assumption that progress in the ability to draw is not general but specific. Increased power to draw, in other words, is contingent upon the mastery and memorization of specific forms, rather than upon the development of general processes. The methods of teaching drawing it is inferred, then, should develop a "graphic vocabulary" of memorized forms rather than a general process of representation.

On this important principle, however, the interpretations of scientific evidence conflict. From the data available the general interpretation that drawing power is specific, not general, does not to the writer appear entirely tenable. The most cursory examination of the processes of accomplished draughtsmen points to a general procedure in representational drawing regardless of the object to be drawn. On the other hand, memory drawing of unfamiliar objects by the same individuals tends to show no such certainty of procedure. The interpretation of such data points to the conclusion that power to draw visible or well-known objects is a general power, whereas, the drawing from memory of unfamiliar objects requires specific development. In a word, representational drawing is subject to general development; conceptual drawing requires specific development. In terms of the psychology of the drawing act, the ability to observe analytically and to make motor coördinations, that is, part of the optical-perceptual and all of the motor-graphic process, is subject to general development. The mastery over conceptual and memory drawing requires the specific development of percepts and imagery in the optical-perceptual process and may be considered as a specific development. In short, then, drawing development is probably general rather than specific where identical elements in procedure or subject matter occur. In other instances—specifically wherever percepts or imagery must be built—development in drawing may be regarded as specific. The correlations present in scientific studies between specific and general drawing ability point to factors which are common to all types of drawing and the probable justification of the above interpretation.

Since drawing directly from actual objects has not proven effective in the lower grades, and since the pupils' knowledge of forms is limited, methods of teaching representational drawing in elementary schools must pay particular attention to providing clear imagery and perceptual learning. Drawing methods, then, must develop this general ability of drawing representationally where visible or familiar objects exist, and in instances where unfamiliar objects are to be drawn specific attention must be given to percept building.

A special method of teaching representational drawing which corresponds more closely to the psychology of the drawing act will, the writer believes, contain some such steps as the following:

1. Select one difficult form to be drawn, and make certain that the child has a clear percept or image of the object.
    - (a) The preparation for teaching of an object to be drawn may be the testing of existing knowledge, that is, ascertaining the degree of clearness of the image or percept and the attendant representational skill. This testing can be accomplished by preliminary drawing by the pupils or by oral or written description.
    - (b) If clear ideas are not possessed by the pupils, percepts and images must be built up through discussion and the showing of pictorial or actual examples of the object to be drawn.
2. Close eyes and visualize or reconstruct mentally by association.
3. Direct the pupils analysis of the essential parts of their individual images by comparison with similarities to or differences from previously known objects or shapes, and accentuate important parts.
4. Draw in air, with index finger, one or more times or make "shut-eye" drawings.
5. Draw accurately once on paper with the art medium.
6. Criticize results, preferably more by pupil criticism of class results and less by teacher criticism of individual results.

7. Correct drawing and draw correctly several times.
8. Use form learned in composition under the stimulus of an audience situation.

The difficulties involved in the third step of the special method here presented will at once be recognized by the teacher who instructs classes in large sections. The impediment to drawing at this point exists in the form both of variety in individual imagery and the difficulty of directing analysis of these various images. Yet, since this is the very crux of drawing learning it is only reasonable that the step in drawing instruction will also be difficult. As such, the question of method should not be begged at this point, but the issue should be faced as to whether the children shall be taught actually how to draw or merely be shown how to copy. The difficult step in the method calls for keen analysis of the form itself by the teacher, skillful questioning and guidance, and an understanding of the workings of the child mind at this time. Consciously or unconsciously the best of drawing teachers at the present owe a great part of their success to this very ability of making pupils draw "out of their heads" and transcribe their imagery to paper.

An objection to this method of procedure may again be justly proposed on the grounds of the time consumed. When it is considered, however, that specific concentration on the representational drawing of an object by the entire class should occur relatively infrequently and only at the time when an object presents insurmountable obstacles for the majority of the class, the time spent on such a lesson may be considered justified. The decision in taking up such a form with the entire class will necessarily rest upon its present and future importance and usefulness and the relative difficulty of its mastery. More simple forms may be more easily taught by individual help or by trial and error learning. Beyond the primary grades, the method of drawing directly from objects will probably be most valuable. The steps in the special method of teaching objective representational drawing has been noted above.

A supplementary type of drawing which has been found very valuable in aiding the analysis of essential characteristics of objects in representational drawing is memory work. *Memory drawing* attempts to separate the act of observing from that of drawing, or, in terms of the psychology of the drawing act, the optical-perceptual from the motor-graphic process. Its methods are chiefly those of observing the drawing object for a longer or shorter period of time, consecutively or alternately, then drawing from memory, and the devices of making kinesthetic and "shut-eye" or "blind" drawings. The first of these methods aims to prolong the span of imagery retention by permitting observation for seconds or minutes, then requiring drawing "out of the head." The kinesthetic device consists of feeling out the representation on paper while looking continuously at the drawing object. This practice tends to coördinate hand movements with observation. During "shut-eye" or "blind" drawing the pencil point is placed on the paper, the eyes are closed and an effort is made by the pupil to draw a line around the image in his mind. Training of this kind aids in the translation process, so necessary for mastering two dimensional representation of objective impressions received tri-dimensionally.

The value of these methods of drawing from memory, then, can be traced to their manner of concentrating the attention on the visual and mental impressions derived from the object, of sharpening the focus of visual imagery, or of exercising reconstructive associations. or finally of aiding in the transcribing process in getting the image down on paper. Beyond these aids to representation, memory drawing is of inestimable value in creative work trained through devices for visualizing and depicting minutely described forms. In this way memory drawing brings imagery under more complete control, permitting mental rearranging and synthesis within the mind, and, since the images are necessarily generalized, such manipulation needs only deal with the essential elements to the exclusion of unnecessary detail and to the simplification of synthetic processes.

Having outlined the existing methods of teaching representational and memory drawing, the attention may be lastly turned to methods of teaching compositional drawing. Beginning with the assumption that drawing is language, the general method of teaching compositional drawing will be the general method of teaching in expression so ably stated by Samuel C. Parker:[35]

1. Provide vital content.
2. Make sure children have clear ideas to be expressed.
3. Furnish motive by providing an audience situation.

[35] Samuel Chester Parker, *Methods of Teaching in High Schools,* (Revised Edition) pp. 291, 142. Boston: Ginn & Co., 1920.

4. Apply the rules of practice:
    - (a) by making associations automatic through effective economical practice after correctly begun,
    - (b) by encouraging feelings of satisfaction or success and attitudes of zeal and concentration of attention,
    - (c) by involving concentration of attention in correct methods of recall in memorizing,
    - (d) by memorizing by wholes,
    - (e) by avoiding waste of time on accessory processes,
    - (f) by distributing periods of practice and repetition in memorizing rather than by making them relatively continuous.
5. Coöperate with other departments in which drawing would be a really useful instrument of expression.

The *special methods of teaching pictorial expression* follow in the main certain methodological parallels to the teaching of written composition, the translating of written compositions into graphic terms, and the "free-expression" method alluded to heretofore. The basic assumptions of the first methods are that drawing is language and that the requisites for learning any language include the acquirement of a vocabulary to be used expressively under the guidance of the rules of composition. Thus, the *"graphic vocabulary" method* is one approach to expression through the memorization of forms to be used in pictorial composition. The proponent of the "graphic vocabulary," the late Walter Sargent, intended that it should be a developing power of representing forms as applied in pictorial expression making for a general drawing power. The present-day interpretations of the "graphic vocabulary" method of developing representational drawing and the negative effects of some of the devices employed have been already discussed.

A second means of arriving at a vocabulary of forms is through the research device. This method presupposes an extensive collection of pictures to be used as reference material. A judicious use of such data is made in best practices, employing the pictures to clarify ideas and to stimulate the imagination before the compositions are begun, without offering the opportunity for copying or wasting time on accessory processes.

The language parallel as a basis for teaching pictorial expression is entirely justifiable in its widest implications, but should not be accepted in the limited sense of latter-day interpretations. Such renderings of the meaning of the language analogy tend to be too literal and to promote misunderstanding. While it is self-evident that drawing is language, there must, of course, be kept in mind the fundamental differences between verbal and graphic language as to source and application. Thus, the source of the language of words is accepted sounds and symbols for meanings while the origins of the language of drawing are the forms themselves. Drawing, in other words, is a language the words of which are forms in ever-changing imagery and combinations. The verbal idiom, on the other hand, is a language the words of which consist of accepted vowels and consonants represented by unchanging letters. This fact has considerable significance in the teaching of pictorial composition. For, whereas the learning of verbal language implies the memorizing of static symbols, the learning of the graphic language requires a "graphic vocabulary" of dynamic images and the developing power of recording and arranging these in unified, coherent and emphatic compositions.

A second method of teaching pictorial expression by means of *translating written compositions* into the graphic language is, as has been noted before, a universally accepted method. Here poems read, descriptive or narrative passages from books, and stories told, form the point of departure for imaginative composition. The effects of the "tyranny of print" are often to be observed, however, in the case of illustrative material drawn from books, since the children are too well acquainted with conventional illustrations of the chief personages that appear in their story books. Hence, they tend merely to copy the representations of the characters appearing in books of fairy tales, fables and legends. In some measure this can, of course, be curtailed by selecting unknown stories and poems for illustration. But, as has before been noted, a vast wealth of material lies outside of literature, and this method is extremely well adapted to the expression of the data in history and geography readings, as well as that of the other subjects of study.

In avoiding hackneyed representations the *"free-expression" method* of teaching pictorial composition drawing has a distinct advantage. Since "free-expression" drawing begins with the child's own experiences—his social experiences, play experiences and emotional experiences—the themes for expression are practically unlimited in scope, and are apt to be more personal and direct in character. Thus the "free-expression" method attempts to reach the child's core of interest, to stimulate and loosen his imagery, and to guide when necessary his expression. As an undictated mode of teaching drawing, "free-expression" is a natural approach to graphic composition; forms are acquired as the needs for drawing them arise; the difficulties of transcribing images and percepts and the complexities of arranging pictorial elements in orderly organizations are gradually overcome. Again, "free-expression" drawing has introduced ample drawing surfaces and more responsive media for expression than hitherto existed. In these respects the method is both biologically and psychologically sound and follows the natural order of learning.

The "graphic vocabulary" methods, on the other hand, following the logical order of learning would place representational drawing before compositional drawing, as the logical order does grammar before language, the alphabet before the word, and, in general, correctness of expression before expression itself. The "free-expression" method of drawing recognizing the importance first of the ideas to be expressed and the felt need for expression, and secondly an untrammeled mode of expressing them, places content before form and, in this way, encourages spontaneous expression. In the early years of the elementary school particularly, what the child says in drawing matters more than how he expresses it; it is most important that he draws much and gladly.

A recent tendency in "free-expression" drawing has been to plumb almost exclusively the emotional experiences of children in order, presumably, to secure less of merely factual and literary products and more of esthetic expressions. This is, no doubt, in line with theories of self-expressionism, but it should be noted that all studies to date of children's esthetic development disprove any esthetic intention behind his early drawings. Such specifically esthetic expressions may perhaps be pursued more profitably at later periods of child life by pupils who have specialized amateur or future professional interests in the arts.

In *the teaching of lettering* the methods in use follow three modes of presentation through drawn, written or cut lettering. Drawn lettering centers attention particularly on correctness of form and proportion, whereas written lettering, the so-called "manuscript writing" method, provides lettering skill for general purposes.

Lettering produced through folding and cutting of paper has proven a practical approach to the teaching of letters and lettering arrangement in the lower grades.

The modes of presenting *instruction in graphic record* when introduced into elementary schools are largely along problem solving lines or in the form of exercises, and the methods employed are generally expository, discursive and manipulative devices, the latter entailing usually copying or working from verbal directions. Much experimentation remains to be undertaken both in content and method of this promising study of graphic record from the standpoint of teaching the "writing" and "reading" of the graphic idiom as part of the drawing experience in elementary school art curricula.

CHAPTER IV

DESIGN AND CONSTRUCTION

Design and construction more than any other phases of art education show evidence of the influx of influences making for a multiformed tradition. The pressure towards the practical in education has been greatly instrumental in shaping the content and experiences in designing and constructing. Until recent years alone the study of construction comprised activities in paper, cardboard, wire, wood, clay, raffia and other media and contained subject matter from educational sloyd, manual training, home economics, and, of late, elementary industrial arts.

At present writing the process of elimination has discarded many superfluous manipulative activities and unrelated instructional material from the construction experience of the elementary grades; and perhaps the revision of subject matter and pupil activities has not yet reached its culmination. The accepted content of construction, or the structural and motor experience, still consists today of constructive activities in various media or "making," modeling, industrial arts, sand-table work and large scale building projects.

Such subject matter and experiences must necessarily be scrutinized from the viewpoint of how efficiently and to what degree they affect the esthetic reconstruction of our environment. The purpose of constructive activities in art education is ostensibly to train for and to carry over into actual life art activities which will serve to beautify our surroundings. Any evaluation of the efficacy of construction activities in art instruction must then be judged from this position of the esthetic differences such learning makes in life situations.

Viewed from this standpoint the most effective content for bringing about esthetic changes in the environment through constructive art endeavors will deal with applied art in its widest significance. Such applications of art to everyday living is necessarily made through the study of art in relation to the individual and his immediate and remote environment. This includes a consideration of personal apparel, interior and exterior arrangements of the home, civic art and general art applications. These subjects are currently studied in elementary art instruction under design, but are here considered as part of construction because of their unspecialized bearings in elementary schools. The content of design, in the present discussion, then, will include structural design, decoration and color study as the projective and ornamental experience, while regarding costume design, interior and exterior decoration together with civic art and plastic art as comprising the structural and motor experience.

Of the design experiences, *structural design* which aims to satisfy the utilitarian demands of an object or situation rather than its decorative offices, is often considered outside the realm of art education. Of late, however, some efforts have been made to correlate design of this kind with the work of home economics and industrial arts for the upper grades. The attempt to solve such structural problems as the disposition of space in floor plans of houses, the arrangement of furniture in a room diagram, and even the rendering of a working plan for the making of a useful article is being introduced on art time. Since there is no necessary break between utility and beauty, such correlations make the design experience more complete and provide an excellent opportunity for teaching the language of drawing as used in graphic record as well as for the teaching of structural design.

Decoration as studied in the design experience teaches the elementary school child something of the meaning of the language of ornament and its applications. The study of pure design brings out the principles that govern orderly arrangements of the elements of design. Thus the principles of unity, balance, emphasis, etc., are shown to dominate all organizations of lines, areas, forms, tones, and colors in good design. This study is conceived less for the purpose of training to produce such designs than with the view to understanding and recognizing these orders in the selection and appreciation of design.

Applied ornament, on the other hand, attempts to account for the adaptation of ornament to its medium of execution and its fitness to utility. For these purposes craft problems have been introduced to give objective experiences in the processes and media used in ornamentation. Hence, craft work in stenciling, weaving, block printing have been admitted, and these represent but a small fraction of the manipulative activities introduced to make results concrete. The resultant tendency has been to lose sight of the initial purpose of such craft work in making clear the processes of ornamentation, the possibilities of media, and the human and social implications that underlie the practical arts. Conversely such manipulative work tends to overvalue the practical outcomes in the form of skilfull production and the demonstrable results of applied design. With both these topics accounts have been given sporadically of the origins of decorative processes and the developments in historical and national forms of ornament.

In so far as such studies succeed in interpreting anew our cultural background, in fostering an intellectual apprehension of what constitutes decoration and its processes, in stimulating feelings of enjoyment upon observing fine ornament, and in developing standards for comparison and evaluation in discriminating between ugly an beautiful decoration, such design study is of considerable value in the esthetic education. What is more, its value will as matter of course extend into adult life and enrichen it.

The content of *color study*, the third important phase of the design experience in elementary school art consists usually of discussions of color nomenclature, systems of color classification and organization, and of application of color. Such study is varyingly successfully in imparting the color knowledge and skill needed for child and adult life. This knowledge needed by the immature and adult individual is readily determined by analyzing the color activities and information employed in actual life. Some of the commonest color activities and knowledge used by all people apparently are: observing colors, naming colors, comparing and matching colors and color schemes, selecting color schemes, combining and applying colors and color schemes. The study of color in elementary schools should aim, then, to provide the information and experiences that are essential for gaining this functional color knowledge and skill.

Color teaching in elementary schools has, in the past, been less concerned with imparting this fundamental training and knowledge in some instances, than with stressing elaborate and technical categories of color nomenclature and systems of color harmonizing now based on the spectrum theory or again founded on the pigment theory of color. Factional allegiances to the spectrum or pigment theories, however, lose much of their importance when the efficacy of color teaching is judged upon the basis of giving unspecialized pupils a sufficiently competent tool for their color needs with which to work and the requisite training for using it.

Consider now the content of the structural and motor experience in art which consists of the study of costume, interior, exterior, and civic art together with plastic art. As a constructive esthetic activity *costume design* is concerned with the application of art to the clothing worn by individuals. The selection of good clothing is part of the appreciation experience; its arrangement and use may be considered one phase of the construction experience in elementary art. Hence this study attempts to indicate the suitability of various linear, area and form relations to specific types of human figures; the color demands in clothing to agree with definite colorations in flesh tone, hair and eye hues; and the use and abuse of costume styles and clothing accessories for certain purposes and occasions. Beside this information, certain health habits may well be emphasized together with the development of esthetic attitudes towards clothing making for care and pride in personal appearance. The selection and appreciation of art qualities in costume are part of the study of esthetic appreciation.

In a similar fashion the study of *interior and exterior home decoration* points out the factors which make for the esthetic arrangement of the room, the home, the premises around the home, and the environs outside the home which make up the city. Beginning with the esthetic effects that can be attained in the child's own room and leading to the orderly city—since the desire for distinction and the esthetic demands appear to weaken as they recede from the personal self—this study makes the individual conscious of wide applications of art.

Modeling and other forms of *plastic art*, which were first suggested by Pestalozzi and supported by Froebel as valuable activities in the elementary curriculum, are of a different nature from the other constituents of the construction experience. For the primary grades these plastic experiences are, like drawing, valuable as perceptual learning as interpreting objects through touch and synthesis. A clearer understanding of things is brought about through modeling, since the tactile sense is of such importance in making impressions concrete. And as imitation of objects in solid forms requires no abstract translation into two dimensional terms, as is a prerequisite for drawing, reproducing objects in clay and expressing experiences through this medium provide additional facsimiles of the real and the imagined as interpreted by the child. Clay modeling, further, is an introduction to the practical art of pottery, with its far-reaching significance and importance to human civilization.

The first enumerated constructive art activities of costume design, interior and exterior decoration and civic art will, perhaps, be most instrumental in making for an esthetically satisfying appearance and habitation. Yet, construction work in current practices include many other activities which must be evaluated as to their worth in contributing to the art course. This subject matter, which commands in some school situations practically the total time allotted constructive work in elementary art, consists of "construction" or "making," sand-table work, large scale building, and elementary industrial arts.

"Construction," in this limited sense, comprises largely heavy paper and cardboard work in problems related to book making, box making, card and envelope making, and the construction of special problems. As conducted in the majority of schools today such work contributes only a manipulative experience guided by verbal directions and devoid of problem solving or interpretative value. The benefits of such activities as paper folding, pasting, constructing, decorating, through "making," are essentially only motor experiences as taught in some schools. In other systems, however, the "free-expression" method of teaching construction provides genuine problem solving situations and opportunities for planning and objectifying art problems and may serve as an introduction to projective designing.

These constructive experiences are applied at times through sand-table work and large scale building projects. The sand-table need not be necessarily regarded as an art medium though it is related to construction work. The most vital applications of the sand-table are, in fact, being made to the social sciences. Relatively few pure art projects are adaptable to sand-table work, among which may be listed civic planning in miniature and exterior decoration of the home. Since the sand-table is as well suited to the social sciences and other subjects of instruction as to art education, then, it need not be considered specifically an art experience, but in such projects conducted in relation to other school subjects art correlations may be very readily made. Similarly, large scale projects in wood and composition board are more closely related to industrial arts and correlate with art instruction largely where the graphic language enters as a means of record, where structural design is the chief factor, or where the esthetic element plays an important part.

Industrial art, "the elemental study of industry," which is closely related to graphic and plastic fine arts instruction, has been instrumental in bringing a very valuable related content to construction work in the primary and grammar grades. Industrial art, however, is a distinct study in itself, worthy of and rapidly gaining a place in the elementary curriculum. Its subject matter and activities are largely concerned with changes in materials made by man to render them more valuable in utility and with the study of the social and economic implications thereto related.

Graphic and plastic fine arts education, on the other hand, is concerned essentially with the beauty of objects made and less with their fabrication, their esthetic value rather than their utilitarian worth, and employs the state of mind of esthetic contemplation or esthesis in contrast to that of analysis or synthesis. Since utilitarian activities differ from esthetic activities in human life—though there is a constant merging of the utilitarian into the esthetic, and hence there is no necessary break between utility and beauty—under our present departmental organization of the curriculum, industrial arts, in the sense of technical study of industrial activities, etc., must be considered a distinct subject as apart from fine and related arts instruction.

Having inspected the chief content of applied art as related to personal dress, the home and the civic environment, and having suggested that "construction," sand-table work, large scale projects, and industrial arts, though correlative to the visual fine arts, are not strictly part of the education which should lead to the beautifying of the environment for our esthetic satisfaction, the methods of teaching design and construction in elementary art education will be considered.

Again the criterion for good method will be its approximation of mental processes in learning, and the basis for judging pupil activity will remain that of its proximity to the social situation.

Though there is no experimentally determined psychology of design, an introspective analysis of the act of designing will disclose some such processes as the following: (1) recognition of the problem, (2) suggestion and assimilation, (3) recreating or originating, (4) experimentation and execution, and (5) application. The first step of the mental processes in designing tends to center on the problem situation or the felt need for design. The recognition of this need for design and the defining of its exact nature constitutes the first act of design. Secondly, having the problem clearly in mind, suggestions from past experiences or from external sources tend to be associated with the present problem, parts or wholes of the associations are accepted or rejected, and the relevant suggestions are assimilated. Thirdly, this pertinent material is reassembled, manipulated mentally or manually, and is recombined into a satisfactory organization or suggests further a new departure towards a more original solution of the problem. In this condition, fourthly, the experimentation with media tends to fixate the ideas, and structural or esthetic arrangements are modified and tried until the results are sufficiently satisfying to warrant a final execution in permanent medium. Finally, the design is constructed in its material or applied to the object.

The *general method of design*, then, is obviously the general method of problem solving. Formally this method consists of the following procedure: (1) the presentation of the problem, (2) the admission of data and the search for means of solution, and (3) the formulation of a tentative answer to the problem and the testing of the solution.

Thus in designing, the first step of the method will give rise to a problem situation. To the pupils this problem must necessarily be a vital one—a real life problem, not merely a design exercise—in order that learning may be dynamic. The need for defining the exact nature of the problem, of clearly recognizing the purpose for designing, is also felt at this point.

The step of suggestion and assimilation of data is a most important one. The demand for a background of design experience and acquaintance with examples of good design is pressing at this time. More than this the imagination must be stimulated and liberated. Most of the devices for teaching design are centered upon this process and consist of numerous "happen-so" devices and the research method. Of the former, certain of these modes of liberating the imagination approach this end through suggestions of line, others through mass, through color or a combination of two of these. Of the line appeals to the imagination, some of the devices used are geometric tracing, the super-imposing of a line by tracing from numerous angles, or random running lines made with the eyes closed. Some of the mass devices employed are the suggestions of ink blots or cuttings from folded paper. For color, the kaleidoscope or accidental minglings of color are devices employed. Finally, lines, masses, and colors are suggested in "happen-so" design by such devices as adapting to pattern: the shadows thrown by illuminated objects, the spaces between objects rather than the forms themselves, or suggestions for design gathered from a fortuitous series of objects, shapes or colors. The research approach to design, similar to the research device for teaching illustration, acquaints the pupils with good examples of design from historic sources, national ornament, and modern decoration which are adaptable to the decorative problems.

The assembling of such suggestions, in the third process of the designing act, is attempted in art teaching from either a logical or from a more natural approach. The logical attitude seeks to govern the organization of the design data by application of the principles of design. For this purpose many art teachers drill in such design principles as balance, unity, rhythm, *etc.* The last named principle receives considerable emphasis in the lower grades, where counting and clapping devices are much used in teaching repetition and progressions in border design. This device is quite similar to the method used in music education for developing rhythm appreciation by beating time. In design, however, this device assumes that conscious muscular movements in rhythm will transfer to spacial movements and that a correlation is present between time rhythm and space rhythm. The logical approach to arrangement, besides instructing in design principles, often employs abstract or geometric forms in order to obviate the influence of pictorial elements and to concentrate upon the abstract design factors. In the teaching of geometric design the use of quadrilled paper, which permits variations in directions only horizontally, vertically and obliquely in measured spaces, has already been mentioned. Other devices for the teaching of abstract and geometric design make use of geometric figures or paper cuttings as the basis for ornamentation or begin with straight line spacing and continue to mass and color arrangement.

The natural approach, on the other hand, accepts the realistic form of an object to be adapted to the conventions demanded by ornament, and attempts in its method to duplicate the natural development of design in racial history. Thus, the so-called "genetic" method of teaching design begins with a naturalistic form that has appeal or significance to the child and through repetition develops that form into a conventionalization. Other naturalistic methods employ nature as a basis for design, conventionalizing natural forms into ornament or embodying the natural laws of growth in decoration, such as running a stemline through a border, then adding twigs and leaves, then blossoms and further detail until the border design is complete.

An evaluation of the relative value of these methods is not at present objectively possible. In lieu of scientific data the deductions to be drawn from general educational theory and the inferences from prevailing tendencies of best practices may be substituted. The tendency in general educational practice towards the psychological and natural order in learning, and away from the logical order, would appear to favor the last named methods and approaches to design. The current methods of teaching elementary design, however, appear to favor one approach as much as the other, and the ascertaining of the predominance of one over the other by statistical methods would indubitably be inconclusive for judging their relative merits.

The fourth step in the design process, that of experimentation and execution, is concerned largely with finally fitting the design to its purpose and rendering the design in the art medium. The final adjustments require, at times, the mitering of corners in a border design by use of the mirror, the transferring of a design by pouncing, tracing, or other transferring devices, and various processes of execution, as well as the final rendering of the design. These manipulative adjustments of a technical nature are usually more easily controlled than the psychological processes before-mentioned, and the efficacy of the technic employed is dependent on specific situations.

To complete the design experience the results are often made concrete through applied design. Here, as has been stated, a multitude of craft activities have entered which may well be included for the purpose of making processes understood and for tracing the origins of these practical arts up to our present-day industrial production, as well as considering the social changes accompanying these developments. The prevailing tendency is to stop short with making processes understood and with producing craft articles by the handicraft method, entirely oblivious of the revolutionary changes which brought about the exodus of the handicrafts and supplanted these with machine labor. A study of the decorative processes of our time and the social appreciations involved might profitably supplant many of the manipulative exercises now occupying much of the art time.

A *special method of teaching design,* as indicated by a summary of current practices would comprise these steps:

1. Direct the origins of the design problem from a definite need to be fulfilled and follow by its analysis and clear definition by the pupil.
2. Stimulate the imagination by numerous suggestions offered by the pupils, by "happen-so" devices, or by illustrative material, and make these acquired ideas the pupils' own through assimilation.
3. Manipulate the suggestions mentally and manually through their study in relation to design principles or through natural forms and structural laws.
4. Encourage experimentation with ideas and expression and make results permanent through technical execution.
5. Construct the design in material or apply to the object of decoration.

The value of current design methods will remain indeterminate until classroom experiments and psychological investigations afford scientific evidence of their efficacy in dealing with the mental processes involved, which should result in an understanding and appreciation of design quality and its processes together with the modicum of skill needed to make such experiences concrete.

Color, in the design experience, is taught largely through expository methods and color manipulation and the pupil activities involved include the making of color charts, wheels, and the application of color harmonies to designs and to articles. These modes of teaching color are probably adequate for bringing out the color nomenclature and theories of harmonizing currently taught. Methods for teaching color comparing, matching, selecting and harmonizing as related to their usage in real life need still to be developed in order to assure the types of color knowledge and skill required by all. The remainder of the design experience, consisting of projective design and the study of the origins and meaning of ornament, have as yet insufficient status in the elementary school art program to make possible a general discussion of their content and methods of instruction.

In *applied art* various methods of instruction obtain for teaching costume design, interior and exterior decoration, civic art, and plastic art as part of the experience of art construction. Costume design and interior decoration tend, however, to be taught in the elementary grades by modified forms of the methodology used in professional art schools. Thus by far a majority of pupil activities in costume and interior decoration are identical in kind with the making of fashion drawings and interior elevations in the art schools. In a minority of cases costume design is taught by clothing dolls or draping large lay figures, while instruction in interior decoration takes the form of building miniature rooms in cardboard and constructing furniture. Only in isolated instances have either of these studies approximated the types of constructive activities met in life. There is a natural hesitancy in using the pupils' school apparel as teaching material, and an obvious lack of furniture and furnishings in the elementary school equipment with which to arrange and decorate rooms. Yet, since the teaching of costume design is largely concerned with imparting information about clothing and developing attitudes relative to proper dress, the methods used should accordingly stress the acquisition of information and the molding of attitudes. The principle in educational psychology that a thing should be learned in the form in which it will be used, points to a probable misapplication of effort where manipulative experiences with pencil and paints in costume design and interior decoration are used to give information and build attitudes. A modicum of drawing skill is probably desirable for girls in this connection, so that they may be able to jot down sketches for the making and arranging of costumes. The other unspecialized skills needed in costume design are generally acquired outside the school or are taught in conjunction with home economics.

The imparting of information plays a large rôle in teaching interior decoration, yet very decided skills are demanded as well for decorating the home. It is the purpose of elementary art education to furnish a basic training for such activities. The miniature room made of cardboard as a substitute activity is far removed from the real conditions under which room arrangements are made. A closer approximation of real conditions which has so far been overlooked, is the use of the school stage and stage scenery for the formation of an endless variety of rooms and their decoration with permanent or temporarily borrowed accessories. The modern school which possesses an "ideal room" in its equipment presents unequaled opportunities for the teaching of room decoration. In some cities enterprising stores display a model bungalow or apartment in conjunction with their furniture and household goods departments and welcome visits by classes. Similarly, museums are particularly willing to coöperate with the public schools, and are storehouses of historical furnishings and, in many cases, sources for illustrative matter. Under the least favorable circumstances the school room itself presents opportunities for applying the principles of room decoration (as it should under all circumstances), illustrative matter from books and periodicals provides a wealth of content for discussion, and the pupil's own room in the home supplies excellent practice material.

The subject matter of exterior decoration and civic art, like costume design, requires the presentation of a body of factual material and the building of esthetic attitudes, employing to these ends discursive and expository methods of instruction. The awakening of civic pride in the sanitation, convenience and beauty of American city building has made this study of momentous importance. The reconstruction of our cities from ocean to ocean, now being carried forward, should provide a great sufficiency of material for this branch of art instruction.

Lastly, *methods of teaching modeling* in low relief, high relief, and in the round, parallel the methods of teaching representational and compositional drawing. Logical methods, such as beginning modeling with abstract geometrical forms, comparable to the "type solid" approach to the teaching of drawing, are passing from use. Here, as with the teaching of drawing, the need is urgent for developing clear ideas to be freely expressed in architectonic form, and for interpreting new material in terms of past experiences. The elementary study of ceramics provides additional experiences with clay building through hollowing-out, built-up, and coil methods of construction, and through the drying, firing, and decorating of articles by processes which are interpretative of the evolution of this useful industry and the development of the race.

CHAPTER V

SELECTION AND ART APPRECIATION

Since the primary significance of art in education is the development of esthetic attitudes towards the visual world, the appreciation of art should suffuse every art experience in elementary schools. Segregated periods for esthetic contemplation of the fine arts, however, are undoubtedly beneficial for the development of esthetic appreciations.

The word appreciation as used in educational discussion today connotes a wide and many sided significance. Its usage is applied to the appreciation of social situations and civic ideals, to appreciation of character in human nature, and to appreciation of works of art. These types of appreciation differ in kind from the nearly pure intellectual understandings to intense affective responses. But appreciation of any sort is essentially within the realm of feeling and outside the field of pure cognition, the underlying distinction between appreciation and intellection being that in the former the factor of a "feeling tone" has entered. The degree to which this "feeling tone" element is present varies greatly, but very often reaches its saturation point in esthetic responses to the fine arts. It is with these esthetic reactions to graphic and plastic art we are here principally concerned.

Since appreciation has the further implication of appraisal of worth, however, the question of *art selection* must also be considered at this point. Here the subject matter and methods are yet in an experimental and developmental stage. While it is generally conceded that the most necessary material for selective art training should be derived from the commercial commodities for consumption in the field of wearing apparel, household goods and general commodities, yet many practical considerations make this ideal material of instruction unattainable. The actual life situation for selecting wearing apparel is difficult to duplicate in the school room. This is particularly true since each selection should be made from a great variety in kind and style of apparel and be adaptable to individual taste and personal suitability as well as to fitness for varying occasions. Household furnishings offer similar obstacles for educating artistic choices. Not only must furnishings be purchased in real life from a quantity of examples, within prescribed limits of pecuniary means, but also in accordance with definite accomodations and domestic needs. Moreover, the content of the evaluative experience, beside entailing the selection of wearing apparel and household furnishings, should include as well the selection of art qualities in articles produced from textile fabrics, leather, metal and stone, wood, clay, paper and produced by means of such processes as weaving, printing, woodworking, modeling, sewing, most of which products are not accessible for school use. Only in relatively unusual situations have these practical considerations been to some degree overcome by means of coöperation with local merchants or through special equipment and facilities in the schools.

The pupil activities in selective art instruction have also been necessarily removed from the real life situation to an approximation, and thereby have lost considerable in realism. Thus, selecting apparel from fashion illustrations, household furnishings from colored reproductions, or objects of art from catalogues is unfortunately far removed from the actual life situation. Methods of teaching art selection have consequently been forced to compromise the ideal procedure. The encouraging feature of the problem, however, is that progressive merchants and manufacturers are availing themselves of this opportunity to educate the taste of consumers and are placing at the school's disposal, wherever practicable, samples and accomodations for this branch of education.

The teaching of appreciation of nature, the fine arts, and the industrial and allied arts through *esthetic contemplation* have fewer obstacles with which to contend, since natural beauty, the museums and commercial reproductions are increasingly available for this study. Certain underlying assumptions are basic to the teaching of esthetic appreciation some of which may be briefly mentioned herewith:

1. *It is presupposed that everyone is capable of some degree of esthetic appreciation, dependent presumably upon native sensitivities and capacities in art situations.* On this fundamental premise that the fine arts exist for all, the teaching of art appreciation holds a permanent position in general elementary education.

2. *It is assumed that appreciation can be taught when teaching is defined as a mode of stimulating, encouraging, and guiding reactions.* The fact that appreciation is outside the pale of intellection and in the realm of feeling has made its methods of instruction less definable and its outcomes less objective than those types of learning requiring demonstrable thinking or action.

3. *Appreciation is a growth process and must not be given a force character.* Like other modes of development, growth in appreciational power is subject to gradual unfoldment.

4. *Appreciation is a subjective, satisfying affective experience.* Esthesis, or response by feeling, in art situations is an experience differing from the pupil activities of analysis, speculation or synthesis of other school subjects in that it requires an attitude of contemplation wherein the art object works upon the spectator, not *visa versa.* Esthesis is productive of a diffused feeling state that is generally pleasurable in character. Because of this pleasure tone involved esthetic appreciation may be placed in the category of recreation.

5. *Appreciation may rise from other than art objects.* Objects of art in the limited sense of productions made by human effort are not the only source of the esthetic experience. Natural phenomena give wide scope for esthetic appreciation and therefore form part of the content of this art experience.

6. *Graphic and plastic art appreciations are specific and variable.* Appreciation of one picture may not transfer to another picture of a similar kind, and in this sense art appreciations are apt to be specific in nature. The response to the same picture may vary with mood, occasion, and other physiological, psychological or environmental conditions and hence appreciations are variable.

7. *Opportunities should be provided in elementary schools for responding to simple esthetic situations.* The response to a color harmony may be a relatively simple esthetic situation; esthesis in the presence of a masterpiece of art may be regarded as quite a complex esthetic situation. It is not to be inferred, however, that this implies periodicity in esthetic development.

8. *Individual differences in capacity for appreciation must be recognized.* As with every subject of instruction, the variations in accordance with native capacity must be taken into consideration in the teaching of esthetic appreciation.

9. *Development in appreciative power is distinct and separate from chronological, pedagogical and mental ages.* It is assumed that growth in appreciative power is probably relatively independent of scholastic achievement or mental maturity.

10. *According to available scientific evidence the optimum period for appreciation teaching appears to be during the stage of adolescence.* Physiological age apparently has some bearing upon affective reactions during the period following puberty. Because the adolescent stage is perhaps most conducive to appreciational reactions it does not follow, however, that appreciative situations should be provided only at this time and precedently or subsequently neglected.

Among the many *methods of teaching appreciation* of art which have been offered, three types of methods are distinguishable. These are certain chronological methods, analytical methods, and interpretative methods. The *chronological methods* of teaching art appreciation tend to disseminate biographical or historical data. The life of the artist, his vicissitudes and the order of his works are the chief elements brought out through biography. Historical appreciation places the artist and his works as a link in the long chain of artistic predecessors and successors, outlines the trend of his times, discloses his artistic inheritance from the past and his legacy to the future, and compares his contribution with his forerunners and followers. Neither of these modes of approach can be said to foster response by feeling (esthesis), but rather response by understanding. If appreciation of any kind ensues it is apt to be appreciation of character in human nature or of social situations, but probably not appreciation of the objects of art.

Analytical methods of developing art appreciation take usually one of two forms. In one case analysis assumes the form of decomposing the artist's creation to discover and examine its ingredients; in the other instance components such as were used by the masters are reorganized by the pupils for the sake of the creative experience or to achieve an approximate effect. Both the decompositional and the synthetic approach to art appreciation may stimulate interest in art, may develop understanding of art structure and synthesis, "appreciation" of workmanship, but usually are ineffective in arousing an appreciation of the object as a whole. The decompositional approach is essentially analytical and fails to recognize that an understanding of each component separately will not necessarily insure an appreciation of the whole. Moreover, likening this method of teaching appreciation to chemical analysis, mere decomposing of a work of art into its ingredients is similar to isolating the components of a physical change, whereas artistic creation is actually more like a chemical action. A new substance is produced in the artistic metamorphosis that no amount of physical analysis can make more understandable or appreciable.

The synthetic method instead of tearing apart an art work attempts to construct. This approach presupposes that making an artistic product will produce art appreciation as a by-product. While it is unquestionably true that a greater understanding of technic and a recognition of good workmanship usually follow manipulation of art media, yet again appreciation of the work of art itself may not accompany understanding of technicalities. Synthesis may bring about a physical change of components, to resume the chemical analogy, but only the esthetic urge—the artist's impulse to create—can bring about the metamorphosis or "chemical action" which results in fine art. Without experiencing this esthetic drive to art activity, the pupil will understand merely the outward appearances of art objects without appreciating their inner relationships. Assuming that esthetic appreciations were developed as by-products to art manipulation, the degree of ability and skill required for creating masterpieces of art is denied most individuals, and if fine art were attainable the requisite training for its production would consume an excessive amount of time and would be out of place in the elementary school program. In view of these facts it would appear that more direct methods for teaching art appreciation should be sought.

The third group of methods which have been tried as means of bringing about art appreciation is the *interpretative approach* through exposition, comparison, or catalysis. All of these methods are commendable on the grounds of directness of attack and the avoidance of circumlocution. The first device employs exposition, description or narration about the art object. But the interpreter's explanation about his esthetic reactions to the object of art is not identical with the esthetic experience itself. At best it is a second-hand experience usually of an intellectual nature rather than a direct response by feeling to the work of art. Actually to communicate verbally the esthetic experience derived from an art work would in itself require the creating of a new work of art in terms of literature, an achievement attainable to but few interpreters.

The comparative method of teaching art appreciation presents simultaneously two or more works of art for the purpose of contrast. Such proceedure instead of bringing out the best qualities of each, has often the negative effect of exhibiting by comparison the shortcomings of one or the other art work. This mode of presentation gives an essentially unfair impression of the artistic work—which is conceived as a unit and an entity in itself—by comparing two mutually exclusive unities and by making one subordinate or dominant to the other object of art.

Finally, the catalytic method of teaching art appreciation, which derives its name from the practice in science of employing a chemical agent for combining and accelerating the fusion of two incompatible elements, attempts to bring the work of art and the observer into harmony. The effort is made to synchronize one form of art with another to bring about the desired esthetic reaction. Thus, a poem or a piece of music is used to stimulate response to a painting of similar mood. This procedure operates apparently on the supposition that all the arts are interdependent, but the device almost invariably tends to confuse impressions. The poem, thus, may have the undesirable effect of suggesting a literary meaning in the painting, or the painting may establish the equally unfortunate attitude of looking for visual images in music. On the whole, among these devices there appears no adequate method for dealing with the teaching of art appreciations.

The most acceptable *general method for the appreciation lesson* to date has been proposed by Frank H. Hayward and consists of the following steps:

STAGES OR PHASES PRELIMINARY TO THE LESSON PROPER:

(1) Negative preparation (foreseeing and avoiding distractions)
(2) Positive preparation (building anticipation)

THE LESSON PROPER:

(3) Immediate preparation (teacher's personal appreciation)
(4) Presentation
(5) Discussion (aesthetic), followed by Re-presentation
(6) Discussion (factual or intellectual), followed by Re-presentation
(7) Reproduction (learning by heart)[36]

Adapted to the teaching of graphic and plastic art appreciations, a special method for this purpose must recognize the need for beginning the teaching at the pupils' level of appreciation. An index of the general level of artistic appreciation and the type of subject matter enjoyed may be gauged at the beginning of the year. This may be determined by some such means as urging each pupil to select the three or more pictures of his liking from a heterogeneous collection of reproductions, including in its scope cartoons, advertisements, illustrations, decorative panels, murals, allegories, portraits, and other forms of pictorial composition of varying merits as art from the mediocre to masterpieces. From these data the median tendency may be deduced and the effort made to satiate the demand for this type of material and to progress to higher levels of appreciation. The nature of this progress in appreciation is dependent on individual likes, and any system of appreciation teaching that arbitrarily plots the course of development and prematurely imposes the classics is doomed to failure. It appears better policy to begin with the children's own choices of "popular art," urging upon satiation of one work of art the consideration, not of the best of all fine art, but the best of that kind of art, and to advance to higher art forms at the children's inclination. Throughout this process of guidance, a policy of strict non-intervention should be maintained and the superior and inferior in appreciational development must be carried forward through individual attention in advance or arears of the average group.

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[36] Frank Herbert Hayward, *The Lesson in Appreciation*, p. 98. New York: The Macmillan Co., 1925.

In the advancement towards higher forms of art the child is at first more certain to select quite inartistic things, if his choices are average and unaffected by adult approval or disapproval. In early years his appreciation of pictures is likely to be uninfluenced by considerations of beauty. Studies of the development of the esthetic sense point to the predominance of materialistic choices in childhood. That which is considered pretty is an object, or the likeness of an object, with which the child associates pleasurable experiences. There is an unquestionable enjoyment of story-telling pictures. For this reason the continuous anecdote of the comic strips hold a natural fascination for the child mind. The dramatic and dynamic in art interests the child and clearly defined effects are best understood. With the accumulation of facts in intermediate years, the fidelity of art objects to detailed reality as seen in photographically accurate works is preferred. The only esthetic factors which enter such preferments are apparently color and movement. The attraction of color, even so, appears less often a feeling for harmony of combinations than a pleasure in mere sense stimulation, and the desire for activity in a work of art may not be so much an appreciation of rhythm and movement as a want for action and motion. These unesthetic preferences, however, are the sources of the taste for beauty, the unfoldment of which is still an enigma, but appears to be related to the refining of feelings and seem to culminate in the unstable period of adolescence.

The "negative preparation" for the art appreciation lesson, as suggested by the general method, should anticipate and intercept before the lesson itself such obstructions to esthesis as may arise. This will include primarily the apprehension of certain undesirable mind sets. Thus, the attitude of straining to find story telling elements or allegorical meanings in a picture should be avoided, premature speculation as to type of composition or kind of color harmony employed should be discouraged, and concentration on the technic employed and other irrelevant data should be restrained in the lower grades. Similarly, misconceptions which might arise from the terminology of the title of the picture or remarks made by the teacher should be obviated by explanations beforehand. The "positive preparation" for the lesson should give advance notice of an exceptional occasion, stimulate anticipation, and the "immediate preparation" should assure that the teacher himself appreciates the work of art before offering it for the pupils' contemplation. Much depends upon this personal art appreciation by the teacher.

In the lesson proper the most essential element for the success of appreciation teaching is a dramatic presentation of the art object. A conscious effort should be made to stir the feelings. This may be achieved by such theatrical devices as raising the auditorium curtain upon the indirectly illuminated art object when the proper moment has arrived, unveiling the object of art to the view of the audience, or by announcing the exhibition of works of art in a place where they may be displayed singly or as a group in an atmosphere and surroundings conducive to individual contemplation. For some individuals, isolation is a prerequisite to appreciation, whereas to others the responses of the group are stimulating and contagious. Ample provision should be made in either case for personal responses, and if personal judgements or preferences are subsequently expressed they should be honest and sincere. At the same time as pupils should cherish their own esthetic experiences, they should also learn to respect the responses of others.

After esthetic responses have been assuredly experienced, discussion and representation may bring out related facts about the object of art. Here is the place for appreciation of the artist as well as his work and the understanding of the times and conditions under which he created. At this point also correlations with history may most profitably be made. In the upper grades some consideration may also be given the means by which the artist's productions were achieved. But the *denouément* should be tenaciously avoided of dispelling the effect of the art object and substituting a mere intellectual experience for that of appreciation.

Closer acquaintance with the work of art, finally, should make it sufficiently familiar, so that it is retained in memory and can be recalled to mind or recognized when seen. This step of "reproduction" or learning by heart is the final stage of the general method in appreciation. In this connection, a means of developing esthetic appreciation of graphic and plastic art, the value of which has heretofore been underestimated, is the employment of habituation as an aid to esthesis. The art departments of public schools pride themselves in assemblying inclusive and choice collections of mounted color reproductions —to which the children take pleasure in contributing—but these might be used more extensively for the purpose of loaning to the pupils on a circulating basis for home use. No more effective means can be at present employed, the writer believes, to raise the standards of appreciation than temporary exhibitions of paintings, sculpture, architecture and related arts on view for weeks at a time in the pupil's own room in the home, the constant living with art works of one's choice. This device for teaching appreciation, if rightly used, has the further value of recording appreciational growth. The kinds of pictures selected should make plain the level of appreciational attainment. The number of requests for pictures will in many instances show the intensity of the desire for beauty. In lieu of direct measures of appreciational reactions, an index of the effectiveness of appreciation teaching will be found in the extent to which pupils seek anew the esthetic experience. The teaching of appreciations in education is probably the most difficult problem of method confronting educators; the effects of appreciation upon the mind are essentially unlike, yet not opposed, to the habits of mind developed by other school subjects; its technic and outcomes are as yet tentative and indeterminable.

Conclusion

The subject matter of art education must eventually shift in emphasis from the current excess of manipulative activities to the more direct teaching of the special subject matter which is its own. This special subject matter of art education, as has been noted, is to be found in communication as carried on through graphic and plastic means, in the esthetic accompaniments which tend to gather about utilitarian activities, and in the creations of beauty which come from the esthetic adaptations to environment made by man. To these ends art education employs the scientific findings of related fields of knowledge and the scientific method of approach to its own problems, guided in its course by the general goals of all learning and the particular purposes of its own contribution to education.

APPENDIX A

GLOSSARY OF TECHNICAL TERMS

ARCHITECTONIC.—Pertaining to design or construction in tri-dimensional form.

CAESURA.—"A break or interruption."[37] (New Standard Dictionary.) That period at which the child ceases to draw due to the discouragement with drawing resulting from inability to develop representational skill at the same rate as perceptual learning increases knowledge. The caesura is more than a plateau of learning and occurs usually—though needlessly—in grades two to four.

CALIGRAPHIC.—Of or pertaining to delineation; linear communication through drawing or writing.

CATALYSIS.—"A chemical change brought about in a compound by an agent that itself remains stable . . . Catalysis is usually accelerative or positive." Here used in relation to employing one form of art to stimulate reaction to another form of art in appreciation teaching.

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[37] See p. 145.

Esthesis.—Used here to designate an affective response to an esthetic situation.

Graphic.—"Of or pertaining to the arts of painting and drawing."[38] (Webster's New International Dictionary.) The expression "graphic and plastic art" is here used to include not only the printing arts and sculpture, but also the space or formative arts included under the head of the fine arts of architecture, painting, and sculpture and the related arts, that is the allied arts (the onetime "minor arts") and industrial arts.

Historiation.—An illustrative decoration occurring in illuminated manuscripts and books.

Kinesthetic.—Here used to characterize a form of drawing wherein motor coördinations are predominantly important; drawing under muscular guidance rather than under optical guidance.

Méthodiste.—Because the English word "methodist" is practically obsolete—(except as a proper name and used to indicate "a member of any branch of the Protestant Christian church")[37] (New Standard Dictionary)—the French term is employed to denote a student of methodology, the science of method, in this case, of teaching.

Mnemonic.—"Pertaining to, aiding, or designed to aid the memory."[37] (New Standard Dictionary.)

PROPAEDEUTIC.—"Pertaining to or of the nature of preliminary instruction; relating to or affording prerequisite discipline, or knowledge introductory to an art or science."[37] (New Standard Dictionary.)

QUADRILLED.—"Marked off into squares, or bearing a pattern of small squares: said of drawing —or writing-paper, textile fabrics, etc."[37] (New Standard Dictionary). "*Art.* Marked with squares, generally by thin lines crossing at right angles and at equal intervals."[38] (Webster's New International Dictionary.)

SCHEMA.—"An outline or image universally applicable to a general conception, under which it is likely to be presented to the mind; as, five dots in a line are a *schema* of the number five."[39] (Webster's Unabridged Dictionary.)

STYGMAGRAPHY.—Drawing through the guidance of dots or points.

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[37] *New Standard Dictionary*, New York: Funk & Wagnalls Company, publishers.

[38] *Webster's New International Dictionary.* Springfield: G. & C. Merriam Company, publishers.

[39] *Webster's Unabridged Dictionary.* Springfield: G. & C. Merriam Company, publishers.

TACTILE.—"That may be touched or felt."[40] (Webster's New Standard Dictionary.)

VALUE.—The amount of light or dark in a color or neutral as compared to a gradated scale of greys ranging from white to black.

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[40] *Webster's New Standard Dictionary.* Chicago: Laird and Lee, publishers.

APPENDIX B

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